

THE BRICKBUILDER.

VOL. 14

APRIL 1905

No. 4

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FROM WORK OF EAMES & YOUNG, ✓ HALE & MORSE, ✓ CALVIN KIESSLING, ✓
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UNFINISHED CHAPEL, CHURCH OF NUESTRA SENHORA DA VITTORIA,
BATALHA, PORTUGAL.

THE BRICKBUILDER

VOL. 14 No. 4 DEVOTED TO THE INTERESTS OF ARCHITECTURE IN MATERIALS OF CLAY APRIL 1905

THE BRICKBUILDER.

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THEATER CONSTRUCTION.

ONE of the Boston dailies, in an editorial under the above title, alludes to a scheme which seems to it to be novel for doing away with staircases in theaters, and substituting therefor inclines or ramps leading from the lower to the upper levels. The editorial goes on to state that the English government is intending to build a temporary structure to test the feasibility of the incline for playhouses. The proposition is to have such a structure set on fire with a hundred men inside of it, and to produce as nearly as possible the conditions of a panic in a theater.

This is a very good illustration of the way in which daily papers will sometimes try to deal with a practical subject. Quite aside from the question as to whether or not a hundred men could be found who would be willing to be panic-stricken to order in a blazing shed, it is quite certain that such an experiment would have no bearing on any real solution of the problem, nor is it at all necessary to make such childish attempts.

The ramp is as old as the staircase. Furthermore, it has been used with marked success for many years in a number of theaters. The Nixon Theater at Pittsburg, one of the finest in the country, has a double set of ramps leading from the main floor to the balcony. A theater in Los Angeles takes advantage of the hillside situation and has ramps leading from the front to the balcony, and from the higher level in the rear to the gallery, so that staircases are entirely dispensed with.

With a rise of not over one in twelve, and better, of one in twenty, such ramps are as safe for a crowd as a level passage and are incomparably better than any stairs being devised. The practical difficulty is that they take up so much space it is seldom that property

owners will consent to their use. But there is not the slightest question about their practical utility nor about their being the safest means of communication which could be devised.

No arrangement, however, of either staircases or inclines can avert a panic. There have been repeated instances, like the occasion of the coronation of the Czar at Moscow, when a panic in a crowd on a perfectly level unlimited plain has resulted in large loss of life. The most that can be done is to eliminate as far as possible obscure corners, sharp turns or places of stumbling. All of this is admirably accomplished by the use of inclined planes.

BUILDING PROSPECTS FOR 1905.

BRADSTREET'S makes some very interesting and hopeful predictions for building operations during the current year based upon reports received from one hundred and eight cities and towns of varying size in the United States. These point to an expenditure for new building amounting to four hundred and fifty-five million dollars, a gain of fifteen and seven-tenths per cent over corresponding work in 1904. The percentage of gain is not uniform throughout the country. The West gains twenty-four per cent as against seventeen per cent in the South and ten per cent in the middle Atlantic states; while New England shows a gain of only nine per cent.

Taking these figures and extending them to the entire country a grand aggregate of about six hundred million dollars for building is foreshadowed, of which amount at least three hundred million will go into material. And as the burnt clay products form the basis of nearly all structural work, at least one hundred and fifty million will very likely be expended in these directions.

These figures are certainly very hopeful, but their full import to the architect or builder will be more fully appreciated when we consider the class of structures which go to make up the bulk of the increase.

Six hundred millions expended in cheap flats or speculative residences does not mean a very substantial growth; but the most encouraging feature of the building outlook is the large number of important monumental structures which are being considered. There seems to be far less speculative work than ever before. The jerry builder will always be with us, and his fragments will have to be gathered up as they were in New York the past month. But the list of important, dignified, permanent structures which are planned for the immediate future is most encouraging to all who are interested in good architecture and thorough construction.

Ecclesiastical Architecture.

PAPER II.

BY R. CLIPSTON STURGIS.

IN a previous paper I reviewed very briefly the two aspects of the teaching of the Church which gave us successively the altar type of church, brought to its most perfect architectural expression before the sixteenth century, and the pulpit type, which, developing later and under less favorable architectural circumstances, never reached so full and perfect a development.



HOLY TRINITY, SLOANE SQUARE, LONDON.

A City Church in a Block.

John D. Sedding, Architect.

In the present paper I propose to attempt to show how the modern demand has been for a building which combines many of the essentials of both these ideals; and how far this has been realized in execution. And, because English Gothic has so much association with the church of which the Protestant Episcopal Church in America is a branch, and because this type, pliable as it is, lends itself readily to the majority of situations and surroundings in this country, I propose to confine myself largely to the considerations of the problem as it has been solved on the lines of English Gothic architectural precedents.

This I do, partly because the field would be too large to cover if I attempted to consider the various aspects of Renaissance church work, and partly because I hope that what I have to say may approve itself as true, whether expressed in the language of the fifteenth, the eighteenth or the twentieth century.

I will take first the needs of a parish church, both in a city and in the country, then of a cathedral church, and then of a college chapel type, and see how the requirements of each, modern as they are, have been met

without losing what was beautiful and essential in the architecture and symbolism of the earlier standards.

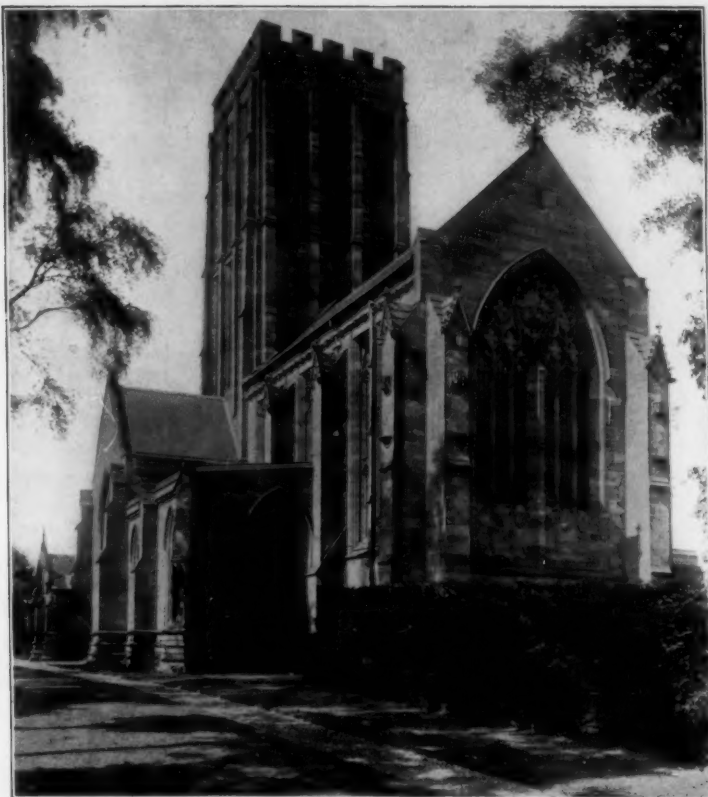
Taking first then a city church and presupposing the most difficult conditions that may exist in a city lot, such as would restrict an ordinary house lot, not on a corner, one must, within those limits, give dignity to the altar, some elevation, that it may be readily seen, and good light, which yet shall not be in the eyes of the congregation. There must be ample space for a choir who are to lead the service of a large number of people, perhaps six or eight hundred or more, and dignified space for the clergy, often three or more, and for the bishop when on visitation. This much is the expression of the requirements of the altar type. It must be modified, however, by a distinctly modern requirement; a large proportion of the congregation, especially at the high festivals, receive the sacrament, and it is imperative that there should be not only accommodation for a good number, say twenty to thirty, at the altar rail, but also convenient means of approaching and leaving the chancel with due order and reverence. This means space at the rail, a good central aisle in the choir and opportunity, perhaps in side choir aisles, for those who have received to return without interfering with those coming up.



INTERIOR, HOLY TRINITY.

A Church Seating about 1,000.

The number of the clergy and the number of the choir are both factors in this problem. A number of clergy, often four in the larger London parish churches, simplifies the administration, but makes such frequent changes at the rail that communicants form a continuous line going up and coming down. In such cases it is especially desirable that separate aisles should be available for approaching and leaving the altar. The choir influences the problem in that it is generally (owing largely to the



THE CHURCH AT HOAR CROSS, WITH CENTRAL TOWER.
Bodley & Garner, Architects.

fact that trained boys are not always available) much larger than would be at all necessary if the voices were all first rate and reliable. The large number in the choir necessitates enlarging the chancel or cramping the space which should be reserved for free passage. This often means that the architect is forced to cramp the aisles, owing to the requirements of space for choristers, out of all proportion to the size of the church. In one of the smaller English cathedrals the full choir consists of but fourteen trebles, three altos, four tenors, four basses, the daily services having generally a considerably smaller number.

Before considering the pulpit and nave it will be well to consider the service, so to speak, of the chancel and sanctuary. The choir form in their vestry and lead into the church, followed by the clergy. The vestry for the choir should be therefore so located as to make it convenient for clergy to join the choir, and at the same time the clergy vestry should be so convenient to the chancel as to make a direct entry possible when the choir is not used. This secondary entrance would serve also when the celebrant goes direct to the altar and does not follow the choir on their entry. Beside choir and clergy vestry there should be also the sacristy for vestments, altar hangings, etc. In many churches these would be of simple description and would require little space, but where colored vestments are used by the clergy, and where the altar has frontals and superfrontals and perhaps em-

broidered hangings to serve as reredos, the proper care of these, which must not be folded, requires special consideration.

There are various ways of bringing the choir into church. The simplest and most direct seems to me the best. Many think that a procession is a ceremony by itself, reserved for important occasions, for high festivals; others consider it a part of every service in which the choir joins. The entry into the chancel and the arrangement of the choir stalls will to a certain extent depend on the point of view. There is, however, in each case a special need to be met.

The people now demand an intimate share in the services of the Church which was not considered in the middle ages. This has already been touched upon, speaking of the congregation communicating. For the same reason a structural rood in a parish church is not only unnecessary, for the division between clergy and people is not now so strongly emphasized, but is actually objectionable as cutting off the choir and more especially the altar from view. The significance of the rood however remains, and the rood beam meets modern requirements and at the same time preserves the symbolic significance of the cross as the means of access to the altar. With the rood beam one often finds a low solid barrier which serves to mark in dignified manner the separation between nave and choir and,



INTERIOR, THE CHURCH AT HOAR CROSS.



ST. AUGUSTINE'S, PENDLEBURY. Bodley & Garner, Architects.
A Church in a Manufacturing Town, but standing free.



in part, helps to screen the boys who, one regrets to say, are not always the edifying sight they should be.

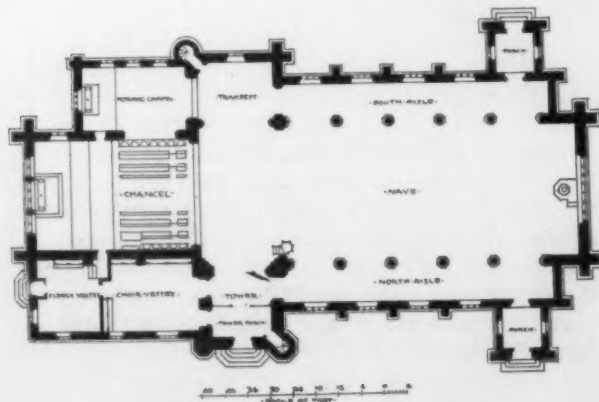
The pulpit, through its over-emphasis in Puritan days, has remained a very important factor in the church, and it is imperative that in a good modern church every one should be able to see or at the very least to hear the preacher. However poorly the clergy preach, it

seems to be an accepted fact to-day that preaching has come to stay and must be recognized as an essential part of the service. With this in view much of the study of architects has been put on the question of how to retain the symbolic nave and aisles and yet make a fair auditorium within which all the seats are good. The most practical and most modern solution is to reduce the aisles to a dimension where they serve practically nothing except passageways. Mr. Bodley's St. Augustine's and Mr. Cram's All Saints', Dorchester, are such plans, although Mr. Bodley's church in its proportion follows more nearly the college chapel type.

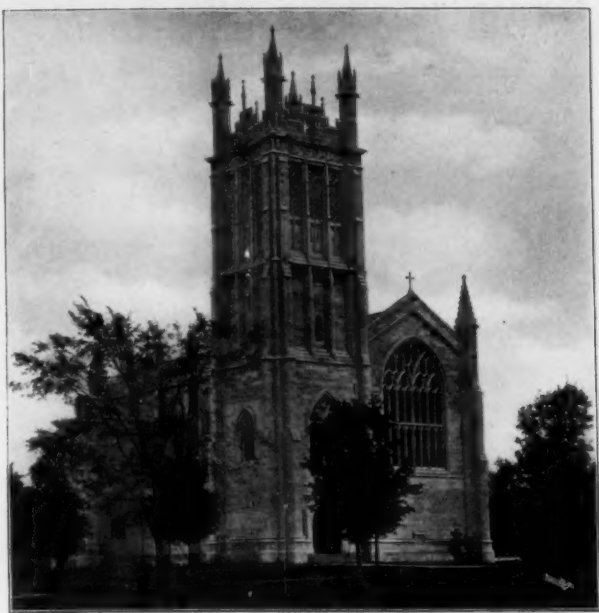
To obtain the plan outlined above on a city lot means a building largely dependent on clerestory light. Mr. Sedding's church, Holy Trinity, Sloan Square, London, is a good example of a modern city church on such lines, but the sanctuary depends largely for light on its great



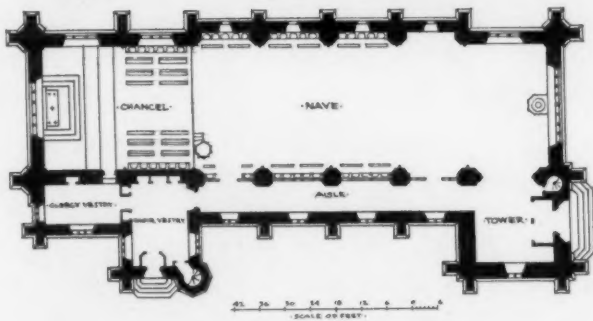
CHRIST CHURCH, NEW HAVEN, CONN.
Henry Vaughan, Architect.



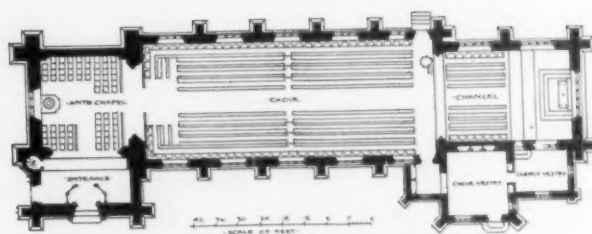
PLAN, CHRIST CHURCH, NEW HAVEN, CONN.



THE CHAPEL, GROTON SCHOOL, GROTON, MASS. Henry Vaughan, Architect.
Seating 150 boys, pew-wise.



PLAN, GROTON SCHOOL CHAPEL.



PLAN, ST PAUL'S SCHOOL CHAPEL.



THE CHAPEL AT ST PAUL'S SCHOOL, CONCORD, N. H. Henry Vaughan, Architect.
Seating some 300 boys, choir-wise.

east window, which is trying for the congregation. Few would consider the church very close to the lines of English Gothic work. Sedding himself I believe described its

with ten-story buildings, in the country they seem entirely in place. In the city then the lofty nave is the one great note of dignity of the church which speaks to its own



ALL SAINTS' CHURCH, ASHMONT, MASS.
A Church in a Suburb, Standing in its own Grounds.
Cram, Goodhue & Ferguson, Architects.

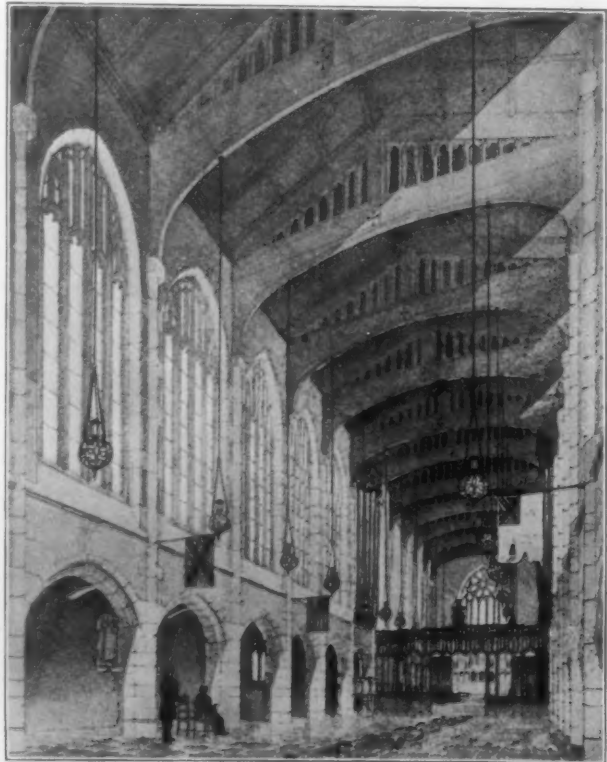
style as "Sedding debased"; none the less it is a fine logical expression of modern church needs.

With the country parish church it is in many respects a simpler question, as one has the freedom that comes from more space and less restriction in light, otherwise the lines for the development of the plan remain the same; the chief difference being that whereas the type dependent on the clerestory for light presupposes height of nave, this is neither required nor advisable in the country; and where city surroundings make tower and spires out of place, for they may weakly challenge comparison

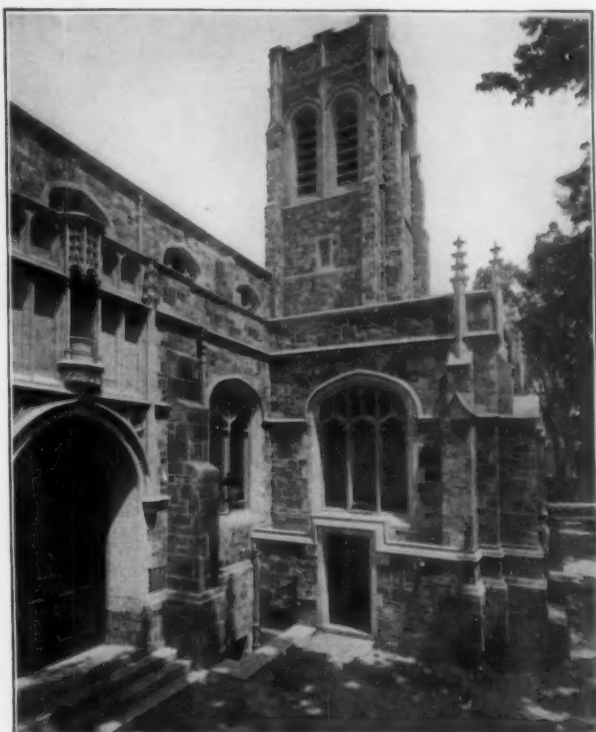
congregation, to those within; in the country the tower or spire soaring above the low lying nave carries a wider message to all who have eyes to see, or ears to hear,



CHAPEL OF THE UNIVERSITY OF THE SOUTH, SEWANEE, TENN.
A College Chapel with detached Tower.
Cram, Goodhue & Ferguson, Architects.



INTERIOR, CHAPEL AT SEWANEE, TENN.



EMANUEL CHURCH, NEWPORT, R. I.
A Church in a small City but having the freedom of the Country.
Cram, Goodhue & Ferguson, Architects.



INTERIOR, EMANUEL CHURCH, NEWPORT R. I.

INTERIOR, "ALL SAINTS" CHURCH, ASHMONT, MASS.

Cram, Goodhue & Ferguson, Architects.



CATHEDRAL AT DENVER, COLO. Cram, Goodhue & Ferguson, Architects.

one may add, for the bells which are so beautiful in the open country may prove rather a nuisance than a pleasure in a place where every added sound is an added burden.

In the churches illustrated here we have reasonable modern developments from the older types, not copies, but practical solutions of present-day problems done in the light of older knowledge.

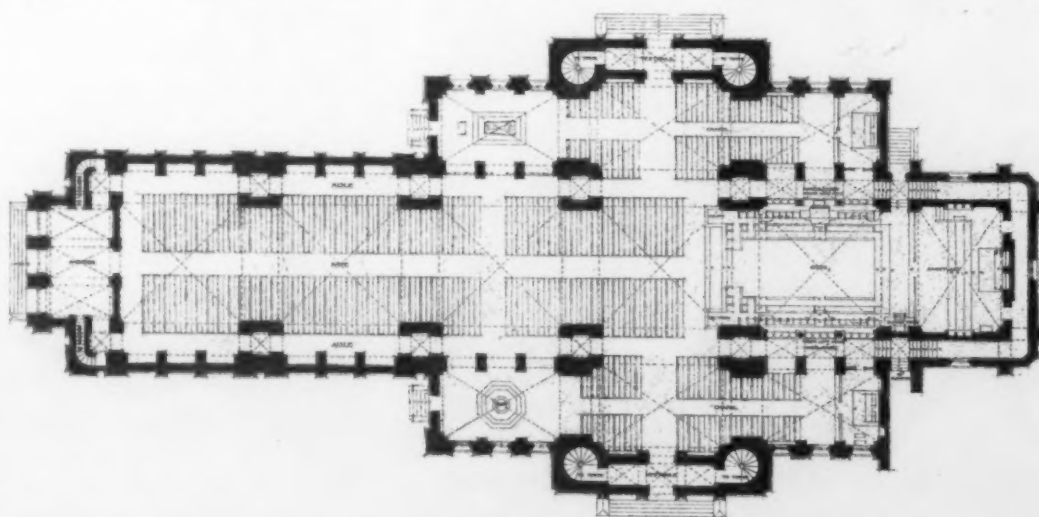
Somewhat different from this is the problem of the cathedral. This, as a modern problem, is still in its infancy. Here, in this country, we do not feel altogether sure that we want cathedrals, we do not feel quite sure what to do with them when we have them. Personally I believe most strongly that we do need them and that they have a great work to perform.

As compared with the parish church the cathedral is a building designed for many services, attended generally by few worshippers. Here daily and oftentimes a day is the sacrifice of prayer and thanksgiving offered for the people. It matters little whether few or many are present at the services, it matters much that the service should be rendered. This, then, is the chief office of the cathedral, —to make a continuous daily offering for the people. The scoffer says, "hiring

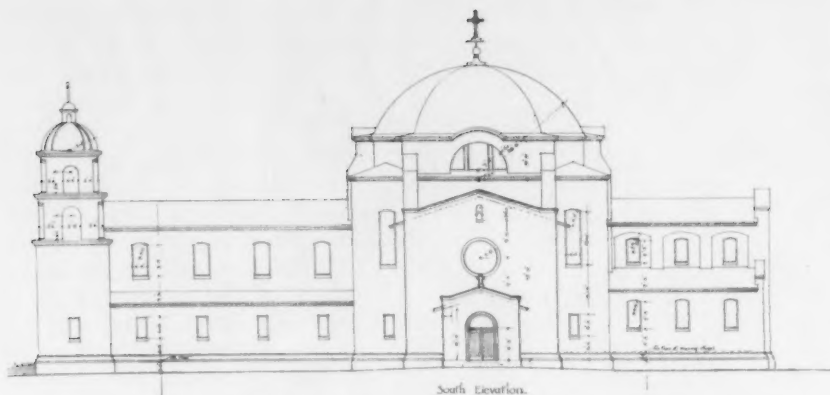
some one to pray for you." That is, in truth, the danger, and the condition to which at times such service has degenerated; but, nevertheless, there is an uplifting thought that underlies the act and makes it reverent and beautiful, and there are few who would not be helped by the knowledge that at such a time God is being served in the appointed way in His church.

To meet this especial need the cathedral of modern times is built. If it were only this, a mere choir would serve the purpose; but it must at times accommodate great crowds, and thus the great size is justified. The consequent impressiveness tells not merely when a great congregation throngs the nave, but also when through the empty nave and the dim mystery of vast spaces the voices of the choir are heard.

The cathedral at Albany is one of the early attempts and is hardly more than an effort to reproduce the past. The Cathedral of St. John the Divine in New York is hardly far enough advanced as yet to judge; but as with the parish church, so with the cathedral, the solution will surely come. The cathedral at Denver is practically a very large modern parish church, thoroughly planned and equipped for a service with a fine ritual; but it is not along the lines which seem to me to make the demarcation between the parish church and the cathedral. It is evident that the chief difference in the requirements would be a



PLAN OF THE CATHEDRAL AT DENVER, COLO.



SOUTH ELEVATION OF THE CATHEDRAL AT MANILA, P. I.
Following the lines of the Spanish Mission Churches.
Sturgis & Barton, Architects.

more complete separation of choir and nave and a freer use of heavy piers and columns, which in a building too big to be filled anyway by a single voice need not be designed as an auditorium. As, however, a very large number should be within hearing of the preacher, the enlargement of the crossing, giving such space for example as under the dome in St. Paul's in London, may appear to be the right direction in which to develop. Some suggestion of this is given in the little cathedral for Manila, hardly more than parish church in size, but planned in part on the cathedral idea.

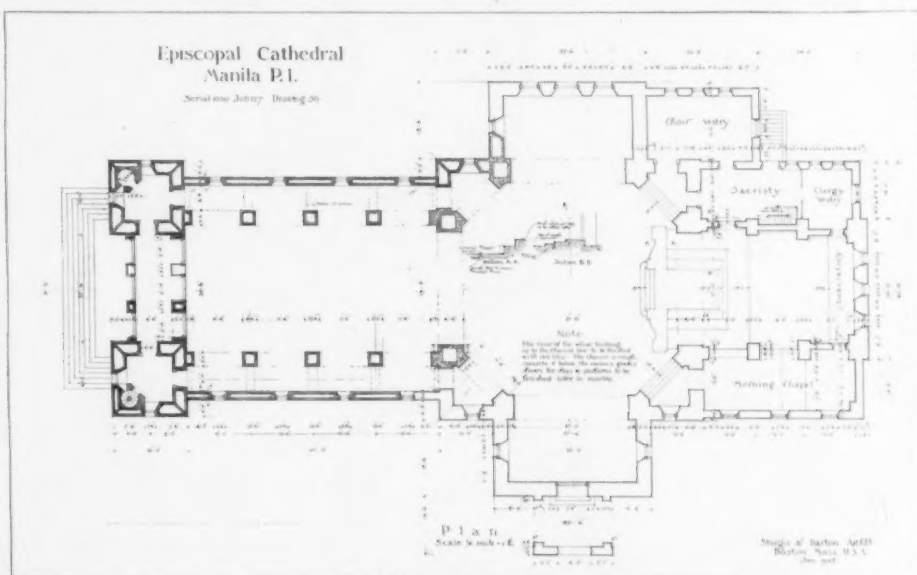
The last type to be considered is that of the college chapel, which, as I have already said, is but a large choir. Planned originally for orders or for colleges, it is primarily intended for and built to accommodate those who are within the screen. A community, whether of church or lay students or fellows, would form this congregation, beyond the screen there is no need except for the occasional outsider. Many beautiful old examples exist, and the type has been used almost without modification for college chapels, for which purpose it is as fitted now as it ever was. Henry Vaughan's beautiful chapel at St. Paul's is an example of this, as is also the chapel at Groton, which, however, has the seats arranged pew-wise instead of choir-wise. This, while a great loss to the beauty of the interior, has the advantage of facing all the seats toward the altar and is suggestive of what might be done with this type for ordinary parish purposes. The college chapel at Sewanee has a tower, well removed, which not only avoids conflict with the lines of the chapel, but actually helps them.

Such is the motive of the church by Bodley at Pendlebury, which is a great choir, with the proportions and character of a choir. Although the exterior gives no

suggestion of aisles, on the interior, it is practically a series of internal buttresses pierced to form an aisle, and to a certain extent suggestive of the triple nave and aisles. One loses somewhat of the symbolism and much of the mystery of the interior, but the type has the advantage of great simplicity.

The tower never seems to be a component part of the college chapel type as it does of the parish church. Even when treated as at Pendlebury as an entirely independent feature, it is obliged to assert its height as against the high ridge line of the chapel. At St. Paul's it is quite overpowered by the chapel, and even at Groton, where the tower is freer and higher in proportion, it fails of the full effect which such a noble tower should have, because it has not the contrast with a long and low church to enhance the value of its rising lines.

With church architecture, given a clear knowledge of



PLAN OF THE CATHEDRAL AT MANILA, P. I.
With large seating Capacity in the Crossing.

the problem, what the structure is intended for, and what purpose it is to serve, and an humble and reverent knowledge of the great work that has been done in the past, the outcome must be good. But without this knowledge it is useless to think that a few photographs and a talk with the rector will enable any architect to build a church. No period of architectural activity is more difficult to understand and assimilate than the closing century of Gothic work. It is impossible to reproduce it, for it was the product of conditions which no longer exist, and one would not want to reproduce it if one could. But that one can absorb the spirit which produced it and work in that spirit to meet modern requirements is amply proved by the work of a very small group of men. If these men have done it, others can also, and I believe we shall see in the future a standard of church architecture that may honorably hold its own with the best mediæval work.

The "Village Block" Series.

ARTICLE III.

BY HUGH M. G. GARDEN.

IT is to be remembered that a village block of six stores with a second story of offices is not the most important building in the village. It must be conceded that the proposition to house six stores and some offices in a building two stories high cannot logically be worked out to a conclusion that will in any way compete, for architectural prominence, with the theater (or, as it is usually called, the "opera house"), the town hall, the county courthouse or the various churches of our imaginary village. Whatever our aspirations for picturesqueness and for architectural display, we cannot, out of these simple requirements, construct anything very magnificent or imposing without adding some of the functions of the more imposing structures of the community.

We can, however, if we are willing to defer the gratification of our aspirations, without loss of interest indulge in the highly fascinating study of what *can* be made out of these simple requirements.

It is evident that besides the important structures, the accents in the completed picture of our village, there must be many less imposing, less important buildings. These form the half-tones of the picture against which the accents stand out as high lights. They form the background and the connecting links which complete the pictures of the streets and lead the eye from one accent to the next. They comprise the smaller business blocks, the houses, the smaller hotels, the livery stables, the warehouses and the host of other minor buildings of private and domestic function, and in their quieter, simpler way each has its own interest and meaning. It is in this way that I have chosen to consider my village block. I have placed it as the connecting link between the town hall and the opera house, facing the courthouse square, from the steps of which building I have taken my view in making the perspective.

The problem given was a block to contain six stores on a lot 200 feet in width, with living apartments for the shopkeepers and their families in connection; these to be located either on the first or second stories. To locate them on the second story would be inconvenient for the shopkeeper, the members of whose family frequently assist as clerks, and in combining their domestic and business duties would find the stairs a hardship. It would also be a sacrifice of valuable renting space to a low rental purpose. The second story on the courthouse square is always in demand for the offices of lawyers, doctors, real estate men, and such. On the other hand the center of the block back from the streets is, in the average small town or village, never so precious but that it may be given up to tumble-down shanties, barns and vacant yards. Why not then devote it to residence purposes if it can be made fit for the shopkeepers to live upon and can at the same time give them the desired direct connection with their stores? It is safe to assume that in a county seat or indeed in any fair sized village the street surrounding the courthouse square or park, as well as the streets on the square itself, will be devoted to business. I have therefore assumed as a site for my building an inside lot 200 feet in width running through from the square to the

next parallel street, a distance of 350 feet. I have placed a store building on each street with six stores in each building. Four of the stores in each block are provided with living apartments, since not every man who wishes to rent a store will also wish a house in connection, and four out of six seems a generous proportion. The center of the block is designed as a small park or court with grass and trees, and the dwellings are arranged as small two-story houses facing upon this park. The entrances to the court for pedestrians are by passageways at each end of the store building, and for vehicles through the public alleys. Each has its separate porch, entrance hall, living and dining rooms, kitchen and pantry on the first floor, and on the second floor three bedrooms and a bath. In addition each has a service yard enclosed in a brick wall and back door and basement entrance in the yard.

The stores measure 26 x 60 feet, and are provided with basement stairs and back doors opening on to shipping platforms from which the delivery wagons can be loaded. These platforms are in paved courts between the houses and are reached from the alley, which arrangement eliminates the nuisance of delivery wagons on the main streets.

The entrance to the offices is located in the center of each block, and a sufficient variety is shown in the arrangement of offices to suit almost any need. In addition the removal of partitions and rearrangement is of course possible.

In design the building relies for its effect on the expression of its functions. In a village something may be and should be conceded to picturesqueness. A more rigid adherence to the commercial aspect of the problem might eliminate the sloping roof and the subdivisions of the sash, but even these might be spared without actual disaster to the design.

The arched store fronts are another matter; but when it is considered that these arches occupy almost the full width and height of each store it will, I think, be conceded that picturesqueness has not claimed too much.

The scheme of materials is, of course, brick, terracotta, a roof of tiles and the usual steel beams and terracotta blocks for floors and partitions.

PROGRAM.

The problem is A Village Block which is to comprise six shops on first floor front. The building is to have two stories and an attic, and the living apartments for family of each shopkeeper are to be located in rear of first floor and in upper stories.

The block is supposed to stand on the public square of the town and is to have a frontage of 180 feet and a depth of 150 feet.

Separate entrances to upper floors of each apartment should be provided for in the front of the building.

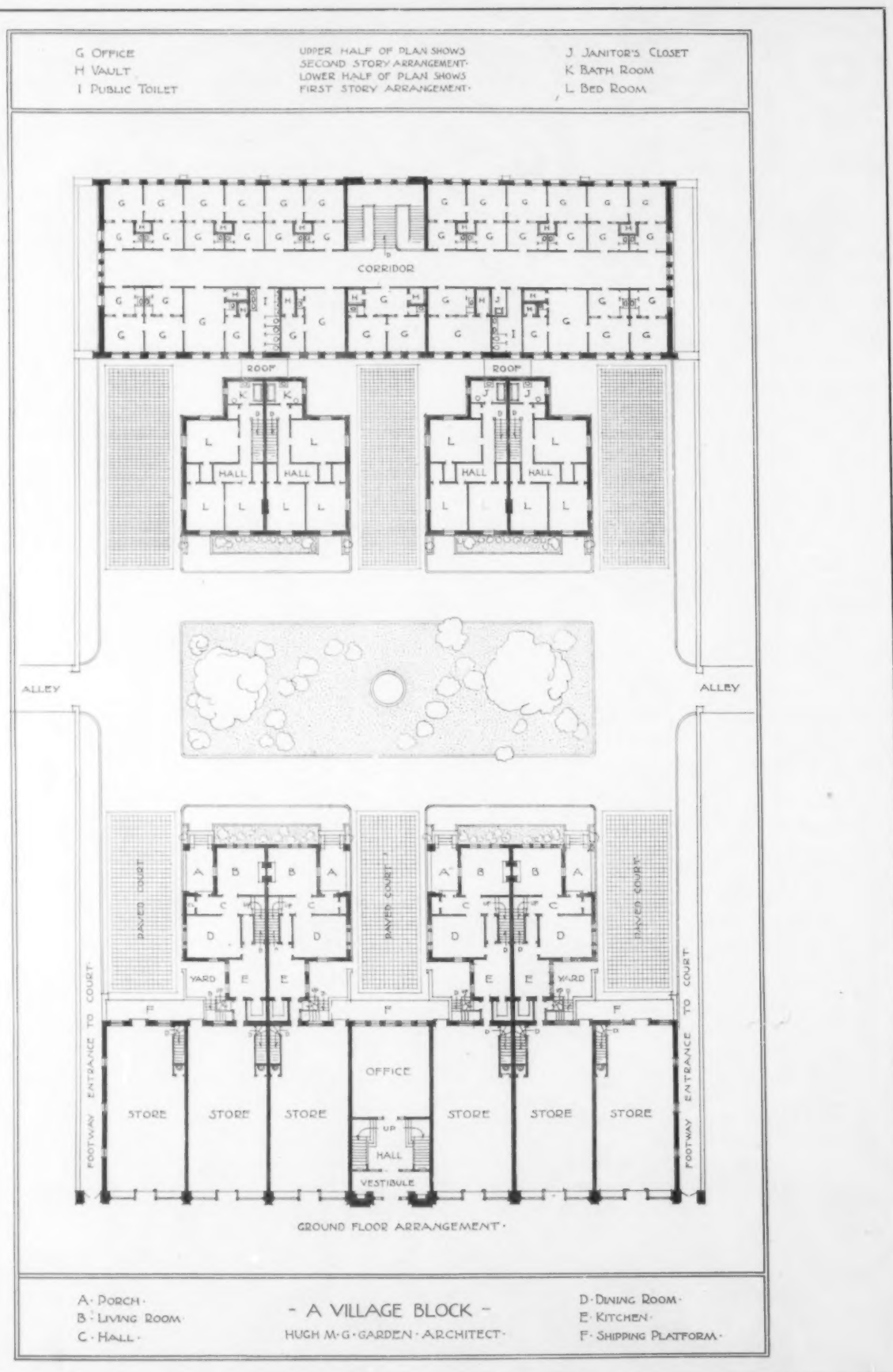
Each design should indicate the arrangement of plan, also in point of architectural style the sort of thing that would be particularly appropriate for the section of the country in which the building is to be located.

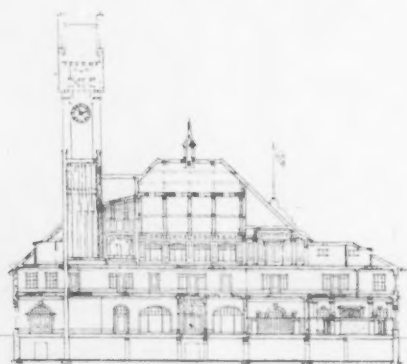
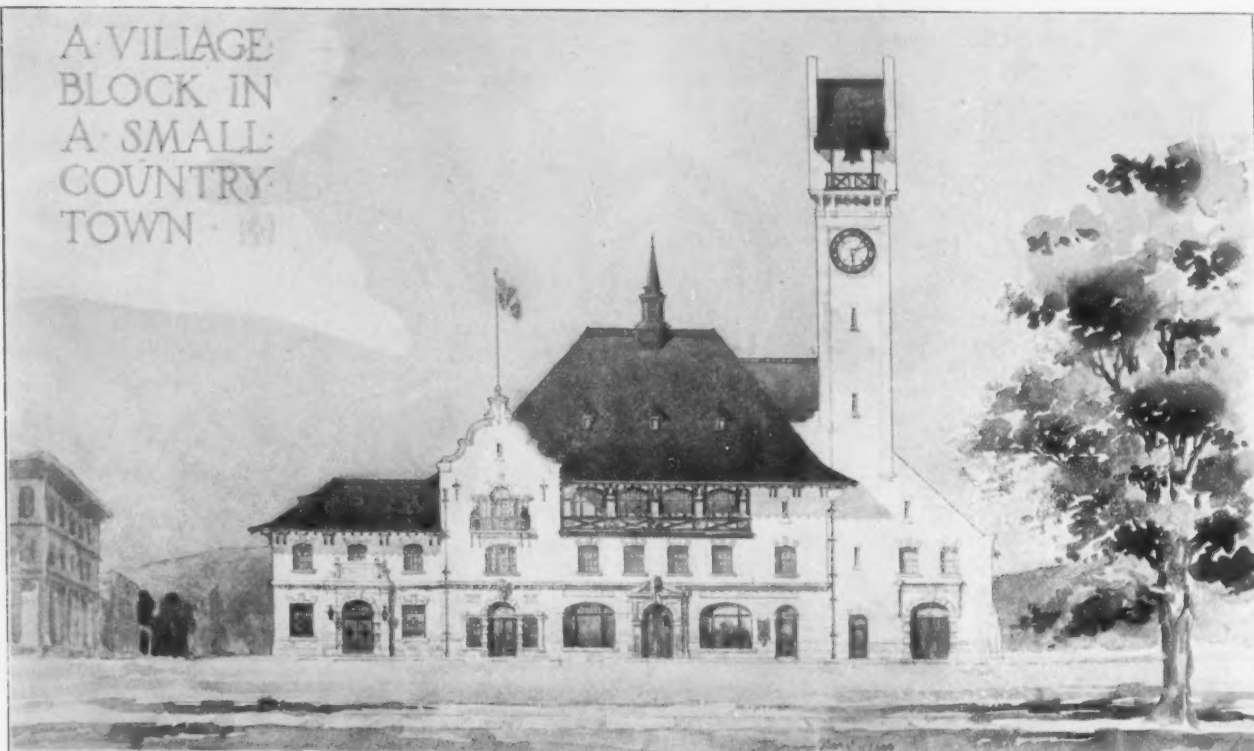
The materials are to be, so far as the exterior is concerned, burnt clay in some of its forms.

The problem is presented with the idea of obtaining designs of character at a minimum cost.

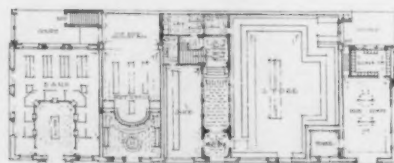


A VILLAGE BLOCK. HUGH M. G. GARDEN, ARCHITECT.





LONGITUDINAL SECTION



FIRST FLOOR PLAN

SCALE 1/4" = 1 FT.

THIRD FLOOR PLAN

SILVER MEDAL DESIGN, SUBMITTED BY HARRY S. WATERBURY IN THE COMPETITION HELD BY THE ARCHITECTURAL LEAGUE OF NEW YORK, FOR A VILLAGE BLOCK.

Boston Brickwork. III.

RECENT RESIDENTIAL WORK. — CONTINUED.

THE closing decade of the last century was marked by the great development of the tracts beyond West Chester Park, as Massachusetts Avenue was formerly called. The Back Bay, overcrowded, had to expand beyond the limits of the original plots. Society, always conservative, refused to venture into the "Fens." The tradition of the delights of a residence "on the water side of Beacon Street," immortalized by Oliver Wendell



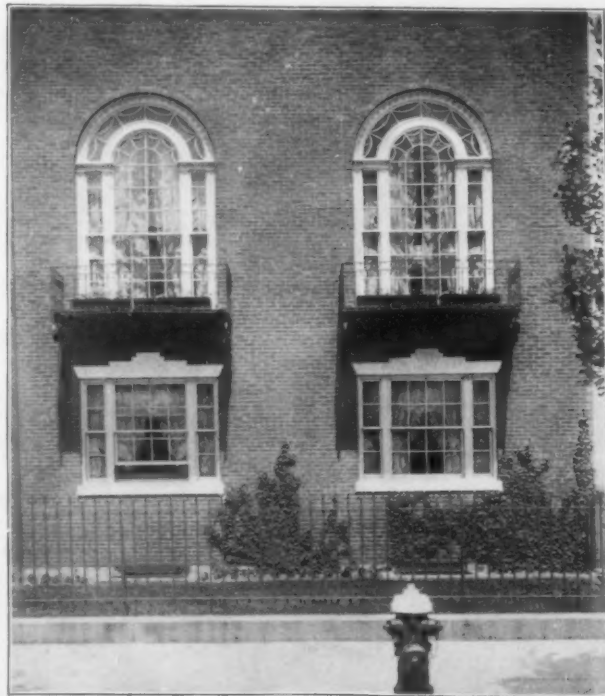
37. DETAIL, HOUSE, BAY STATE ROAD.
Little & Browne, Architects.

Holmes, was strong in the minds of the prospective home-builders of Boston. A street was laid out following the shore along the upper waters of the Charles River basin which, under the name of Bay State Road, met with immediate popularity. No dreams of the noble water fronts of Hamburg or Paris clouded the brains of the hard-headed designers of the newer Back Bay. To match exactly the conditions of old Beacon Street, even with its sea wall and squalid rear alley, was their highest ambition. And so the houses stand with façades fronting on a street sixty feet in width, while their unsightly backs are visible across the wide river from a long stretch of what will soon become a noble parkway.

With old Beacon Street conditions existing in advance it is not surprising that old Boston architecture, or lack of architecture, should be the keynote of the general design, and that the so-called "Colonial" expression should be regarded as of paramount importance; but considering the era and the general condition of architectural affairs, the architecture of Bay State Road, as a whole, cannot be considered eminently successful. The city atlas of 1890 shows, beside the original block of speckled brick houses built by Chadwick & Stillings, only one house, that of Mr. Arthur Little, on the entire street. The work on Bay State Road was, therefore, entirely con-

structed during a period of high architectural development. And yet it must be conceded that no actual fault can be found with the designs; with a few exceptions they are correct, dignified and restrained; Bostonese from grass course to cornice, but lacking the aspiration, spirit and verve which are needed to make architecture a living art.

The first dwelling on Bay State Road, beyond Raleigh Street, was the red brick, very Colonial house built by Arthur Little, the architect, for his own occupancy, and it has not been exceeded in interest by any subsequent structure. The window treatment, with small panes and green blinds, is charming and the entire conception is a delightful version of the artist's house (Nos. 37, 38 and 43). The city is indebted to Little & Browne for the tall house in buff brick and white marble on the easterly corner, opposite (Nos. 39 and 40), which recalls some of the old London work of the Georgian era. The details of this house, both in marble and wrought iron, are exquisite and the blinds are an effective feature. Next to Mr. Little's house are the two houses built by E. M. Wheelwright (Wheelwright & Haven), the one at the left, we believe, for his own occupancy (shown in No. 43). These have very pleasing fronts in water-struck brick and white marble. Next beyond is a very attractive three-storied house by F. Manton Wakefield, with



38. DETAIL, HOUSE, BAY STATE ROAD.
Little & Browne, Architects.

good detail and pleasant proportion and not Colonial (No. 41). This is followed by two more, the first tall and rather French in feeling, the next lower and Colonial (No. 42). Nos. 47 and 48 are by Chapman & Frazer, and possess in full the homelike quality for which the work of this firm is always noted, while at the same time the details are full of delicacy and refinement.

Beyond these two houses, Boston Colonial holds



39. HOUSE, BAY STATE ROAD AND RALEIGH ST.
Little & Browne, Architects.



40. DETAIL, HOUSE, BAY STATE ROAD AND RALEIGH ST.
Little & Browne, Architects.



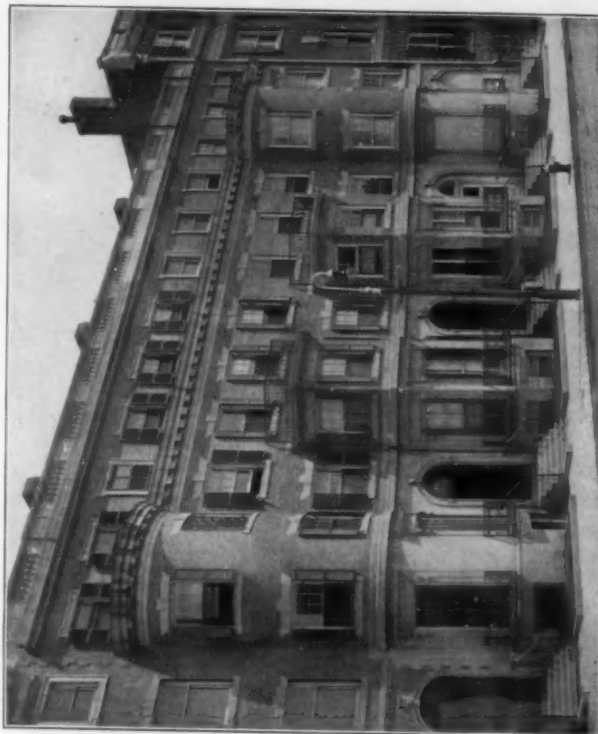
41. HOUSE, BAY STATE ROAD.
F. Manton, Wakefield, Architect.



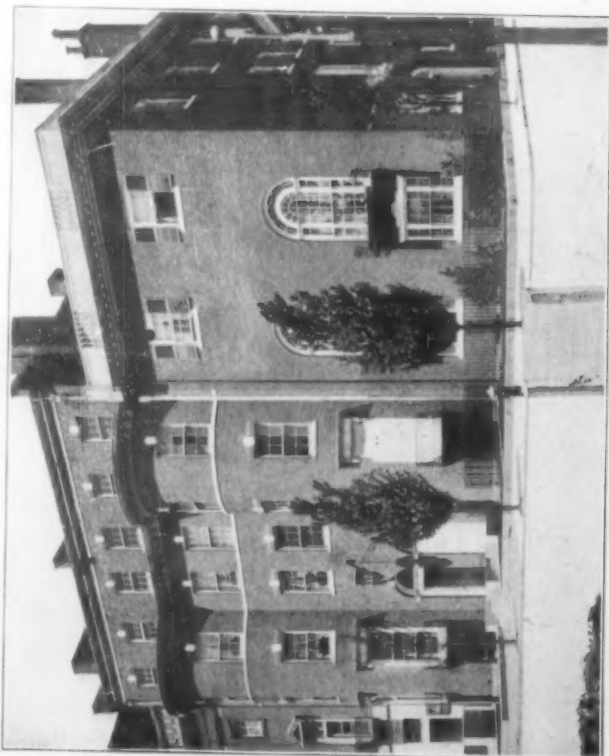
42. HOUSE, BAY STATE ROAD.



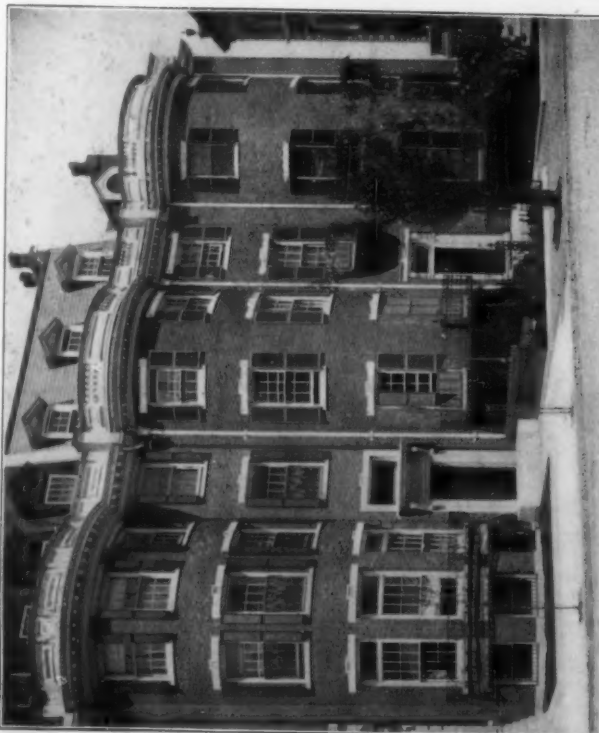
44. HOUSES, BAY STATE ROAD.
Center one by Little & Browne, others by Winslow & Bigelow.



46. HOUSES, BAY STATE ROAD.
E. M. A. Machado, Architect.



43. HOUSES, BAY STATE ROAD.
Homes of E. M. Wheelwright and Arthur Little, Architects.



45. HOUSES, BAY STATE ROAD.
Persistence of "Colonial" Type.



47. HOUSE, BAY STATE ROAD.
Chapman & Frazer, Architects.



48. HOUSES, BAY STATE ROAD.
One at left by Chapman & Frazer.



49. HOUSES, BAY STATE ROAD.



50. HOUSES, BAY STATE ROAD.

almost undisputed sway for the entire length of the street. No. 44 shows five houses, all by Winslow & Bigelow, except the central one, which is by Little & Browne, and is slightly higher than the others. The house to the right of this was built by Mr. Winslow for his own occupancy, and, taken in connection with Mr. Little's and Mr. Wheelwright's houses on the same street, appears to indicate a decided personal preference for houses of this type among Boston architects. No. 45 shows three more good Colonial houses, some having details of Salem origin, and all cheerful and homelike. No. 49 shows French influence and has an iron fence and marquise. Nos. 50 and 51 have central bay windows and rather low stoops. The former adjoins the Weld house, by Peters & Rice, already illustrated in *THE BRICKBUILDER*. The latter is by James Mulcahey. The block shown in No. 46 was built for the market from



51. HOUSES, BAY STATE ROAD.

designs by E. M. A. Machado, and is a very attractive row, in brown Roman brick and light sandstone.

While the present and the preceding articles do not entirely cover the scope of residential work in the city proper, they probably give a fair impression of the field, and show tolerably well the general trend of architectural thought during the last decade. At the present time a rather slight French influence is being felt, but it is scarcely marked enough to be taken as an indication of what the future will produce.

THE idea that the necessity for fireproof construction can be measured by the height of the building dies very hard. Our wise legislators continue to assume they have prescribed the full duty of man when he is allowed to build almost anything he pleases up to a certain height. As a matter of fact, all the great conflagrations, without exception, have started among or been spread by low buildings, not even as high as 50 feet.

Revision of the Building Laws of Philadelphia.

A LITTLE over a year ago a revision of the building laws of the city of Philadelphia was brought about by the action of the insurance companies in adding what they termed a "Pink slip" to all the policies on properties within certain prescribed limits called the "conflagration district," and in other parts of the city exposed to great fire hazard. The property holders through their trade organizations were instantly up in arms against the alleged injustice of the increase. In reply the insurance companies pointed out that owing to the absence in the building laws of provision against certain forms of construction, notably wooden interior construction of large buildings such as stores, hotels and apartment houses, that these forms of buildings had increased to such an extent as to so greatly increase the fire hazard in certain sections, that it was necessary to increase the premiums to cover the risk. After ample discussion of the subject, a committee was appointed to prepare an amendment to the building laws which would provide against the evils of which the insurance companies had complained.

The revision of the laws of a large city to meet the "conflagration hazard" is probably the first that was ever undertaken with this end solely in view, and it has been the means of directing attention to the building laws of other cities which are also faulty, and one other large city is now engaged in bringing its laws up to modern requirements.

The principal subjects covered by the revision of the laws were:

A classification of the different kinds of building construction into the first, second, third and fourth classes, and the restriction of areas and enclosing of hatchways and stairways and the limitation of the height of combustible buildings.

Buildings of the first class were to include all buildings which are of what is generally known as "fireproof or non-combustible construction."

Buildings of the second class were to include all buildings of the type known as "slow-burning construction," with heavy girders and beams spaced far apart and floored with planks not less than three inches in thickness.

Buildings of the third class were to include all buildings of joist construction.

Buildings of the fourth class were to include all other buildings not included in the first, second and third class.

The growth of large hotels and apartment houses in certain residence districts having joist construction led the committee to provide that apartment houses, hotels and tenement houses, schools, etc., which exceeded four stories in height, should be of fireproof construction. All hospitals and sanitariums exceeding two stories in height should also be of fireproof construction.

In the buildings of the second class or slow-burning construction, to be used for stores or factory purposes, the limit of height was placed at eighty-five feet.

The committee had in subcommittee fixed this height

at sixty-five feet, but the textile manufacturers argued that they would be driven outside of the city limits if this height was adopted, and the provision was therefore made for six stories, or eighty-five feet in height.

The height of the non-fireproof buildings having been fixed, attention was next directed to areas of all buildings.

The restriction of areas was made to apply to fireproof as well as slow-burning construction. In fireproof construction, the limit was made twenty-five thousand square feet on any floor, with provision for increasing this area on the ground floor, if an approved system of automatic sprinklers was installed in the entire building.

The specification for buildings of the first class was made rigid and requires that all ironwork shall be fully protected against fire and external changes of the atmosphere by a covering of brick, terra-cotta, tile or other approved fireproofing, completely enveloping the structural members. Around external columns the fireproofing, if of brick shall not be less than eight inches, and if of hollow tile not less than six inches, with two sets of air spaces.

Interior columns and girders shall have not less than three inches of fire-resisting covering, with two inches covering for the webs of girders and for the floor beams.

It will be noticed that the new law provided for a greatly increased thickness of covering for the fireproofing on the structural members, and also that the law was enacted before the occurrence of the Baltimore fire, where the ordinary covering of one inch and one and a half inches was proven to be so inadequate.

Rust proofing was provided for in the requirement that all built sections of girders or columns inaccessible after erection should be filled with Portland cement concrete.

All floor systems of filling are required to have stood actual tests of three times their allowed loading, with a maximum span of eight (8) feet for arches of brick, terra-cotta, concrete or any patent floor, excepting reinforced concrete or heterogeneous systems if their depth is three-fifths of an inch per foot of span, with a further provision that no arch should have a rise less than one and one-fourth inches per foot of span.

In the revised law the placing of pipes, conduits, mains for heat, light and water, inside the covering of columns, was expressly forbidden, and the experience of the Baltimore fire proved that this was a wise restriction.

In buildings of the second class the undivided area was restricted to fifteen thousand (15,000) square feet, and in buildings of the third class or joist construction to five thousand (5,000) square feet, with the privilege of increasing this area to seventy-five hundred (7,500) square feet, if the floor planks are not less than two inches thick. It will be noticed that the "slow-burning construction" building permits twice or three times the floor areas of the joist construction, depending upon the thickness of the plank flooring in the third-class building.

One of the greatest gains made in this law was the positive restriction placed upon open stairways, elevators and hatchway, chute or vent openings in all buildings other

than fireproof structures for office purposes only, except those under five thousand (5,000) square feet in area.

The insurance engineers have been advocating for years the enclosing of the necessary openings in floors by fireproof partitions, and this law is the first one to provide for it. It will be noticed that even in fireproof buildings, with the single exception of office buildings, that this provision applies.

Another provision of this law was the prohibiting of wooden ceilings and wooden studs for furring and partitions and wooden lath. The elimination of wooden lath, studs and ceiling was a great step away from tinder-box construction.

The Philadelphia law contains an admirable provision for what are known as "tower fire escapes," which are required of all buildings of the first, second or third classes which are used for schoolhouses, tenement houses, flat houses, stores, offices, factories, etc., and the number varies with the class of buildings.

The tower fire escapes do not communicate with the building, but are only reached by means of a balcony on the outer wall. They are required to have large openings on each floor, to prevent the accumulation of smoke.

In the framing of this law the committee was compelled to adopt a very conservative course. The provisions and restrictions are not by any means ideal, but had they been very radical, the large property interests might have caused the defeat of the whole revision in the State Legislature. The restriction in the matter of areas is not as great as it should have been, and had joist construction for all but dwelling houses been eliminated it would have been a great gain.

The possibility of the revision of existing laws so easily proved in Philadelphia, encouraged the national fire insurance associations to begin a work of education in other cities, and its good efforts are beginning to bear fruit.

There is really no reason why the building laws of large cities should differ to any marked extent, as was pointed out in the article on the "Structural Design of Buildings" in the December issue; and if out of Mr. Schneider's efforts, and the efforts of the Philadelphia revision committee, and the national insurance societies a uniform building code can be written, a higher standard of construction will follow, which will cause us to wonder why it required so much effort to bring about what was so obviously necessary.

One immediate effect of the Baltimore fire was the prompt recognition of the "conflagration hazard" in cities, which had not been fully appreciated before, and also, in the case of Baltimore at least, of the necessity of building a city according to some sensible system, which it is to be hoped will be heeded by other cities. Narrow and crooked streets lined with high combustible buildings furnish the conditions requisite for great conflagrations.

The Baltimore fire furnished another lesson in the matter of fireproof coverings. The often inadequate and careless work shown at critical points in the fireproof coverings of important buildings, which failed and exposed the ironwork, proved that Philadelphia has been none too exacting in requiring that thicker and better covering be provided for protecting the ironwork of fireproof buildings.

Editorial Comment and Selected Miscellany

BUILDING COLLAPSE IN NEW YORK.



DETAIL BY A. A. RITCHER,
ARCHITECT.
Excelsior Terra-Cotta Co.,
Makers.

ANOTHER building collapse was added to the season's record for such casualties on April 5, when about five hundred pounds of concrete fireproofing crashed through the five floors of a thirteen-story apartment hotel in course of construction in New York.

The floors of the building had been laid with concrete. It was claimed that recent rains had softened the concrete to an unusual extent, causing it to be "soggy," to quote the newspaper expression. As cement is a product which is supposed to harden under water, the only inference is that the quality of the mixture was decidedly poor, or else, which was quite as likely, that it had been frozen

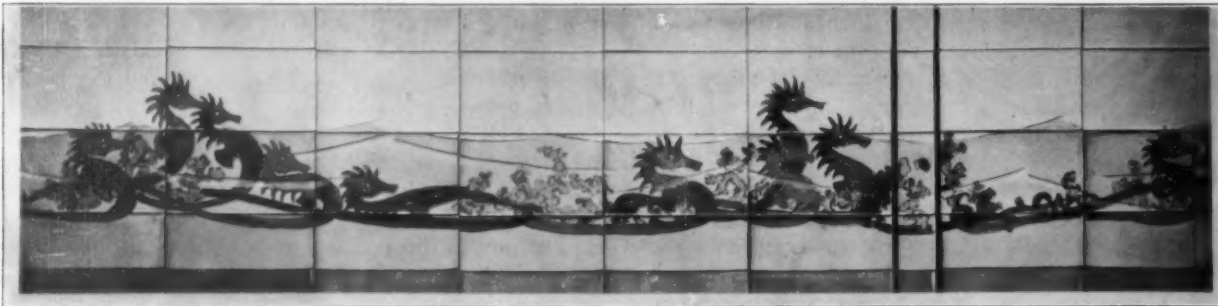
flooring in the seventh story gave way while a workman was standing upon it, and crashed down through all of the stories to the third.



DETAIL BY CONKLING-ARMSTRONG TERRA-COTTA CO.
D. H. Burnham & Co., Architects.

Much more serious than the foregoing, however, was the recent collapse of twenty-three apartment buildings in the upper part of New York. These were not all in one group, but were scattered around various portions of the new district which has sprung up with the extension of rapid transit towards the north of Manhattan.

The fact that, as reported by the commission of experts who investigated, these buildings were erected without proper supervision, under inefficient inspection, and by incompetent contractors suggests a familiar tale.



FRIEZE FOR A BATHROOM, HOUSE, NEW YORK CITY.
Painted in Colored Mat Glaze. Executed in Faience by the Rookwood Pottery Co.



DETAIL EXECUTED BY NEW YORK ARCHITECTURAL TERRA-COTTA CO.

before being set and the rain had simply washed out the ice.

A section of the

In only one case was the architect whose name is on the plans put in charge of the con-



DETAIL BY AMERICAN TERRA-COTTA AND CERAMIC CO.
Jarvis Hunt, Architect.



DETAIL FOR NEW HIPPODROME, NEW YORK CITY.
Atlantic Terra-Cotta Co., Makers.
Frederick Thompson, Architect.



HOSPITAL FOR THE INSANE, MASSILLON, OHIO. Yost & Packard, Architects.
Roofs covered with Celadon "Conosera" Tile.

struction In the application for the permit the builder was ignored entirely. Both the workmanship and the material appear to have been about on a par with the efforts of the notorious Buddensick, who a number of years ago paid in state's prison the penalty of the collapse of some of his wretched constructions, a fate which ought to be meted out to the owners of these collapsed structures, though we are very skeptical of anything being done whatever to secure adequate punishments.

The recommendations of the experts are none of them new. All have a familiar sound, and they are such as are promptly put in evidence after every disaster of this sort. Of course, an architect should be required by law to supervise the construction of his buildings, and, of course, an architect



DETAIL EXECUTED BY PERTH AMBOY TERRA-COTTA CO.
George B. Post & Sons, Architects.

before being allowed to practise should be required to show some evidence of his ability.

The features in the recommendations, however, which are not so often brought to the front are that the bureau of buildings should grant permits only upon plans prepared by registered architects, and that contractors for mason work or structural steel should likewise be licensed, though the full value of such recommendations is considerably nullified by the further suggestion that the coöperation of the recognized organizations in the trades would be of value.

The laws of France hold an architect personally and pecuniarily liable for all structural damages occurring within ten years from date of completion



DETAILS BY ST. LOUIS TERRA-COTTA CO.
Weber & Groves, Architects.



GATE LODGE, FARM, LEXINGTON, KY.
Roofed with American "S" Tile.
Copeland & Dole, Architects.



DETAIL BY BRICK, TERRA-COTTA AND TILE CO.
Wood, Donn & Deming, Architects.

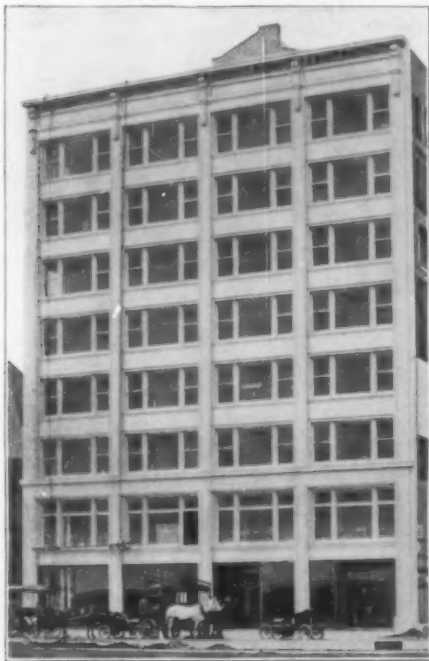
of any building designed by him. This makes a very severe load and imposes an actual burden on the property, for it of necessity implies that the architect shall be continuously employed long after the time when in this country his connection with the work would cease. But we

believe some such arrangement of this sort is bound to come with us.

IN GENERAL.

R. Guastavino Company have removed their New York offices to the Fuller (Flatiron) Building, Madison Sq.

Frederick Junius Sterner and George H. Williamson, architects, have become associated for the practice of architecture; offices Jackson Building, Denver, Colo.



GRAPHIC ARTS BUILDING, CHICAGO.
Enameled Terra-Cotta used for entire front.
Northwestern Terra-Cotta Co., Makers.
E. R. Krause, Architect.

The firm of Cowell & Love, architects, having dissolved, the business will be continued by Edgar L. Love; office Huntsville, Ala. Manufacturers' samples and catalogues desired.

The plant of the Jewettville Pressed and Paving Brick Company, makers of a stiff mud red front brick, which is perhaps as well and favorably known as any brick of its kind on the market, has been enlarged to meet an increased demand for its product.



DETAIL BY NEW JERSEY TERRA-COTTA CO.

Robert C. Martin & Son, New York agents for the Blue Ridge Enameled Brick Company, have closed the following new contracts: Fordham Hospital, Raymond F. Almirall, architect; power houses for New York Central Railroad at Yonkers and Port Morris, N. Y., Reed & Stem,

architects. They will also supply their vitrified buff brick for the exterior of these power houses and fourteen new apartment houses for which J. Scharsmith is architect.



TRACTION TERMINAL BUILDING, INDIANAPOLIS, IND.
Built of "Ironclay" Brick
D. H. Burnham & Co., Architects.

WANTED — In an architect's office, New York City, a man of experience and excellent references, capable of superintending construction, figuring and checking, drawing and corresponding. Write stating experience, references and salary required to Tee Square, care "The Brickbuilder."

The Fireproof House Competition CLOSES MAY 15, 1905.

The Programme for this competition was published in THE BRICKBUILDER for January, February and March, 1905.

Architectural Faience. Competition A. Subject: A Garden Wall Fountain.

ONE CASH PRIZE ONLY. FIFTY DOLLARS for BEST DESIGN. Also MENTIONS.

Competition closes May 31, 1905.

PROGRAMME.

In a brick wall which encloses a small formal garden, at the end of a path, it is desired to place a Wall Fountain which is to be executed in Architectural Faience.

The Fountain, with its embellishments, is to occupy a wall space of not more than one hundred square feet.

The color scheme may be indicated by a key.

Garden Pots and other accessories may be shown.

Drawings required. Plan and Elevation at a scale of one-half inch to the foot.

Drawings may be rendered at will on a sheet of unmounted white paper, measuring 16 inches by 20 inches.

Each drawing is to be signed by a *nom de plume* or device, and accompanying same is to be a sealed envelope with a *nom de plume* on the exterior and containing the true name and address of the contestant.

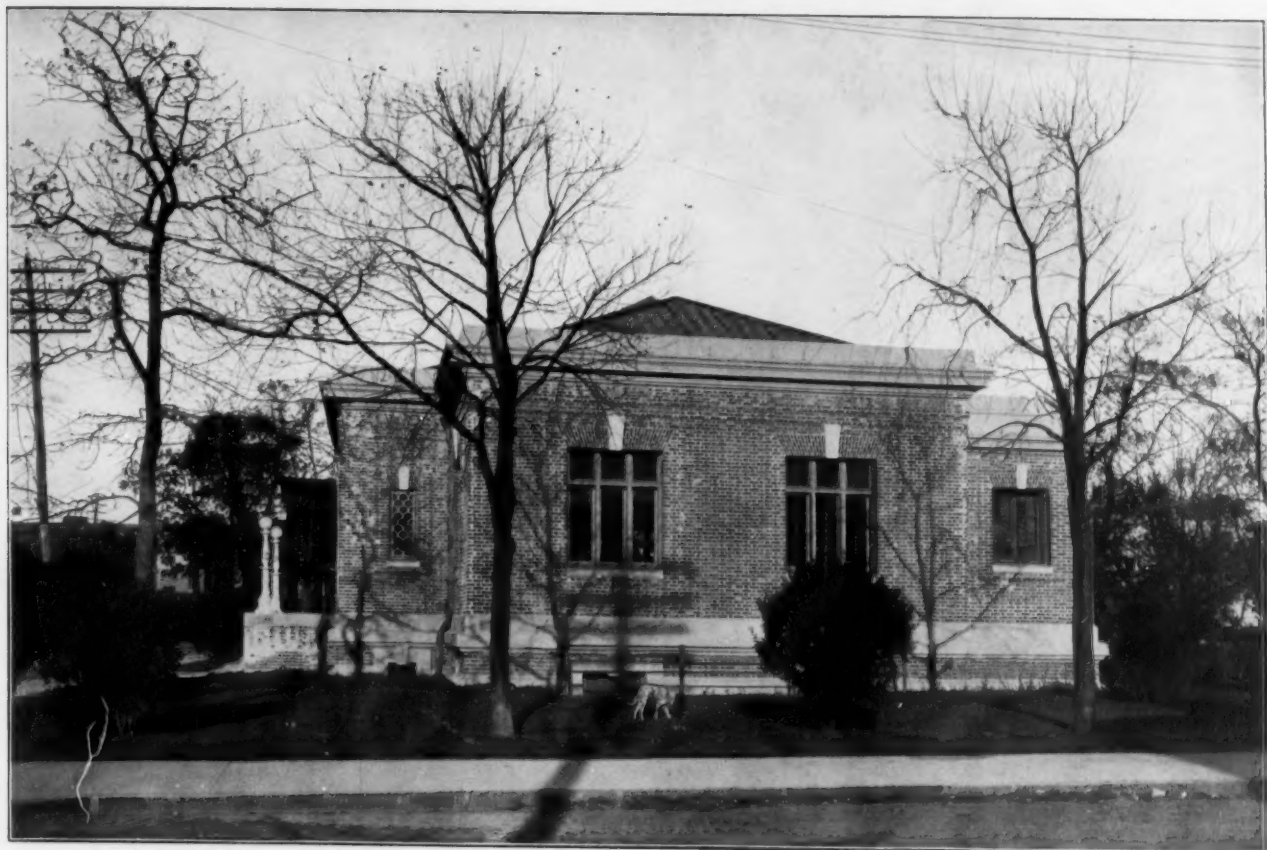
The drawing is to be delivered at the office of THE BRICKBUILDER, 85 Water Street, Boston, Mass., charges prepaid, on or before May 31, 1905.

The prize drawing is to become the property of THE BRICKBUILDER, and the right is reserved to publish or exhibit any or all of the others. Those who wish their drawings returned may have them by enclosing in the sealed envelopes containing their names five cents in stamps.

The designs will be judged by a well-known member of the architectural profession.

Competition open to every one.

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LORD & HEWLETT, ARCHITECTS.

THE BRICKBUILDER,
APRIL,
1906.

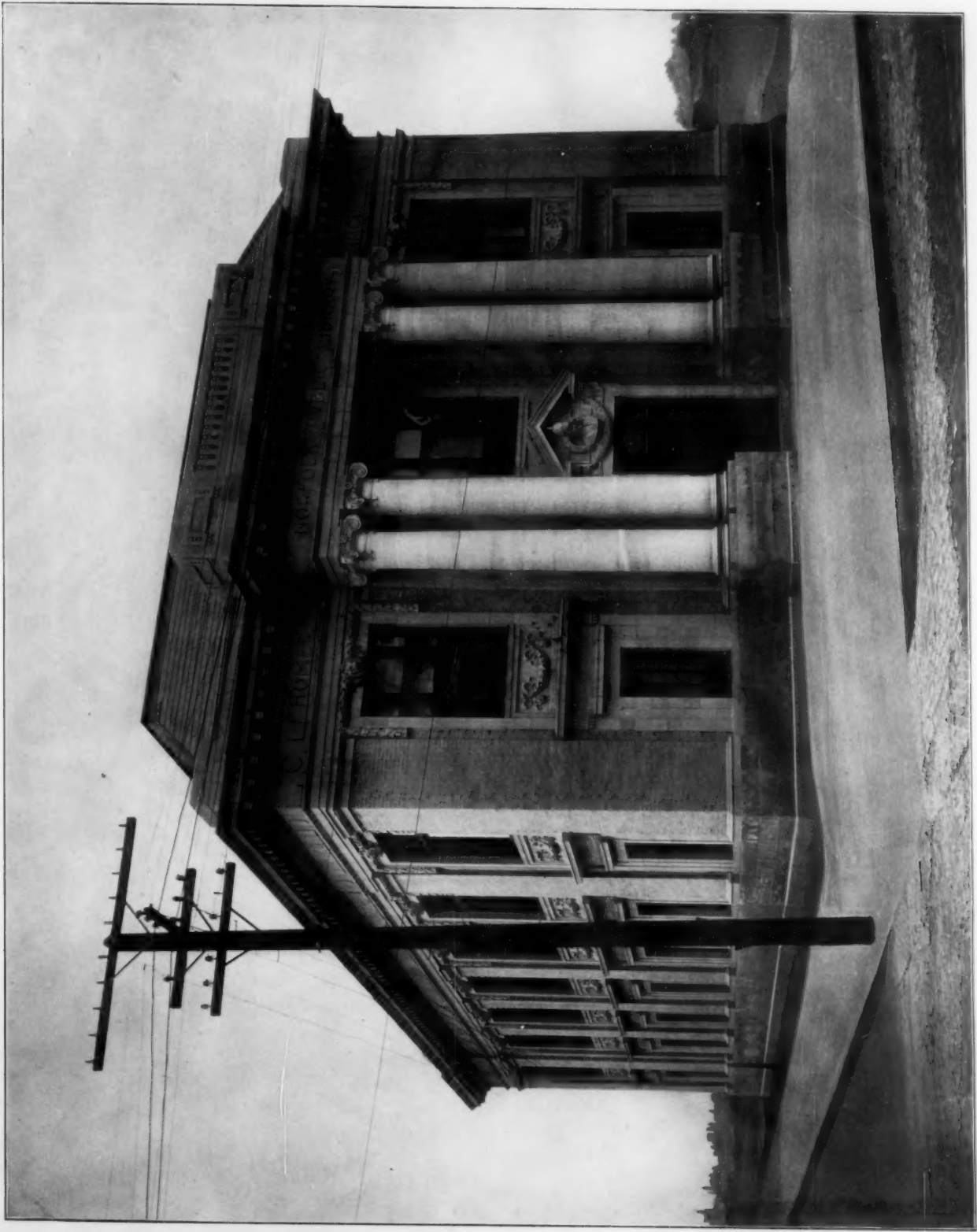




DETAIL OF MAIN ENTRANCE.
PUBLIC LIBRARY, COLORADO SPRINGS, COLO.
CALVIN KIESSLING, ARCHITECT.

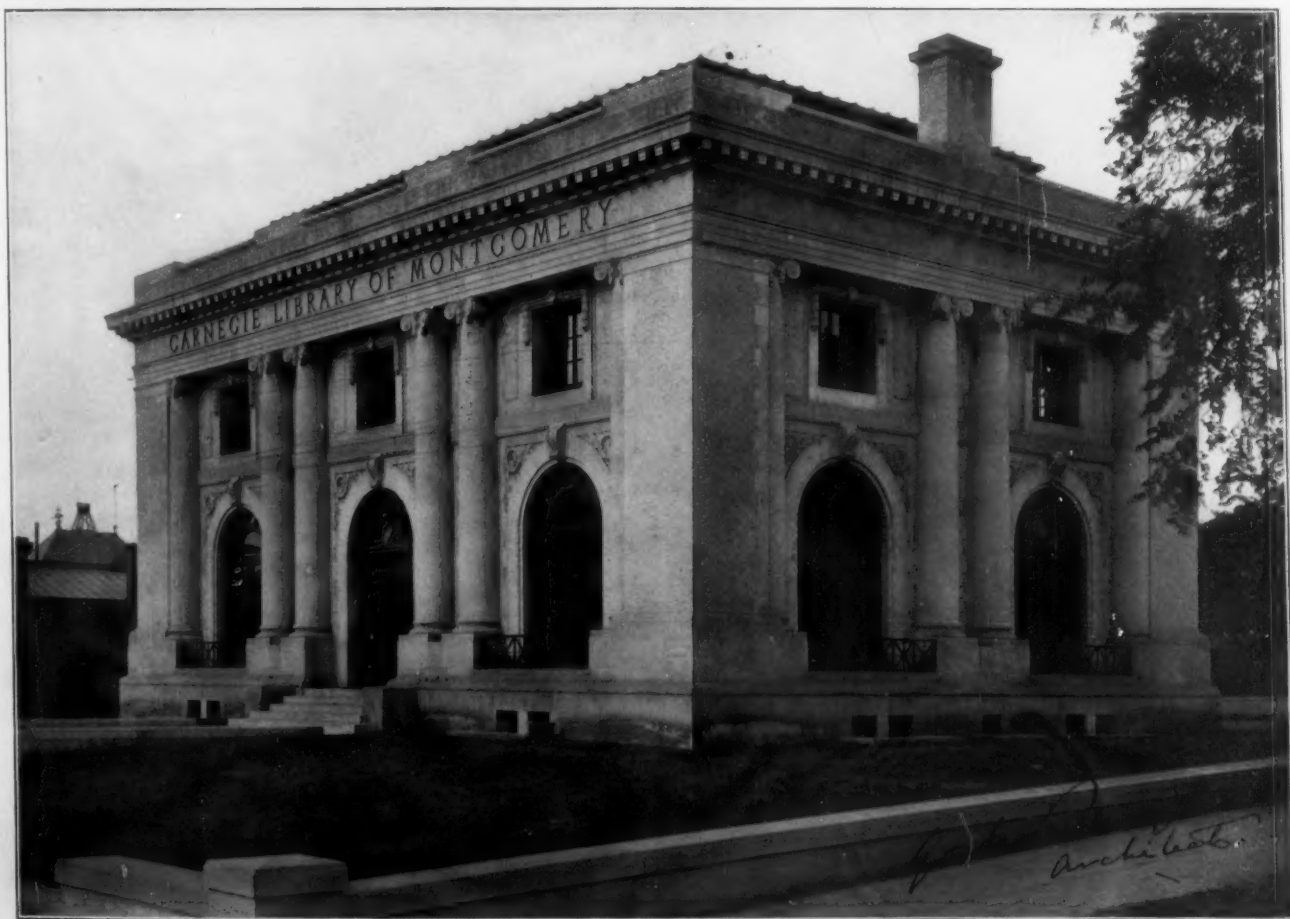
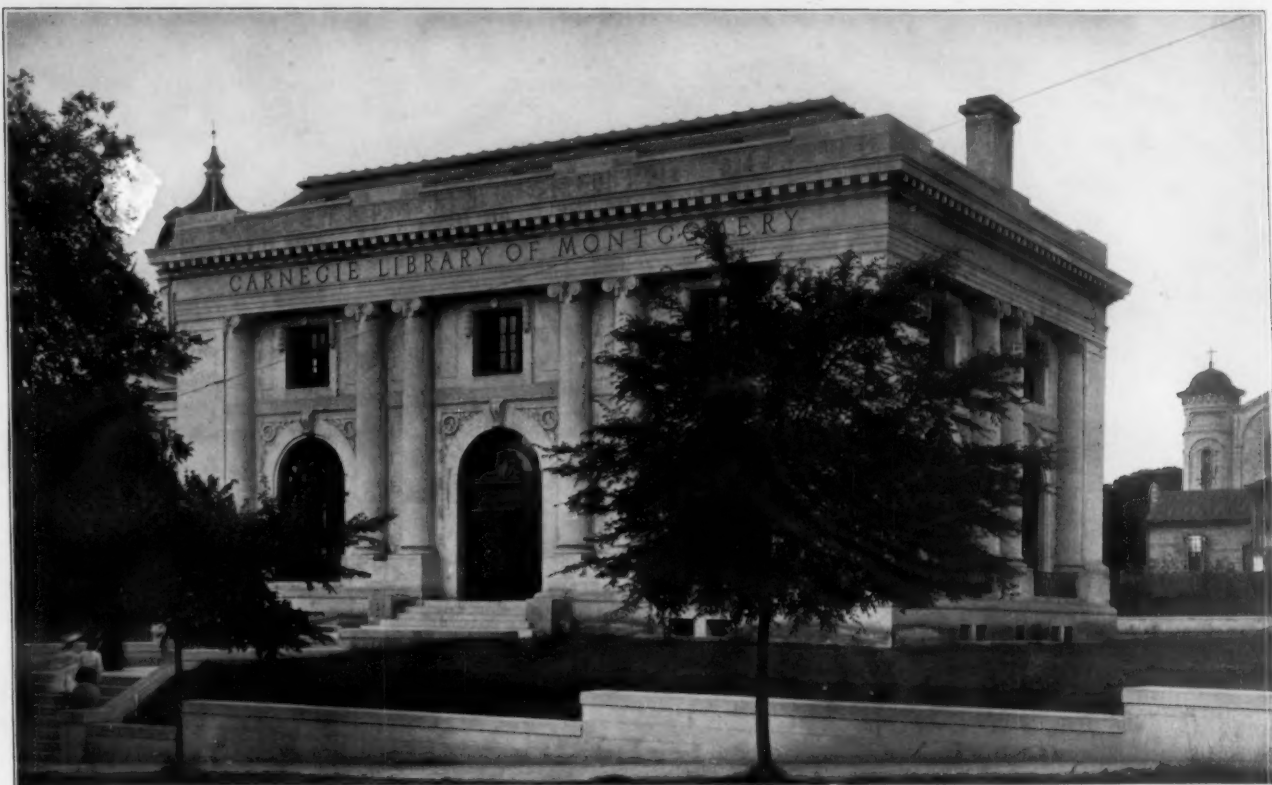
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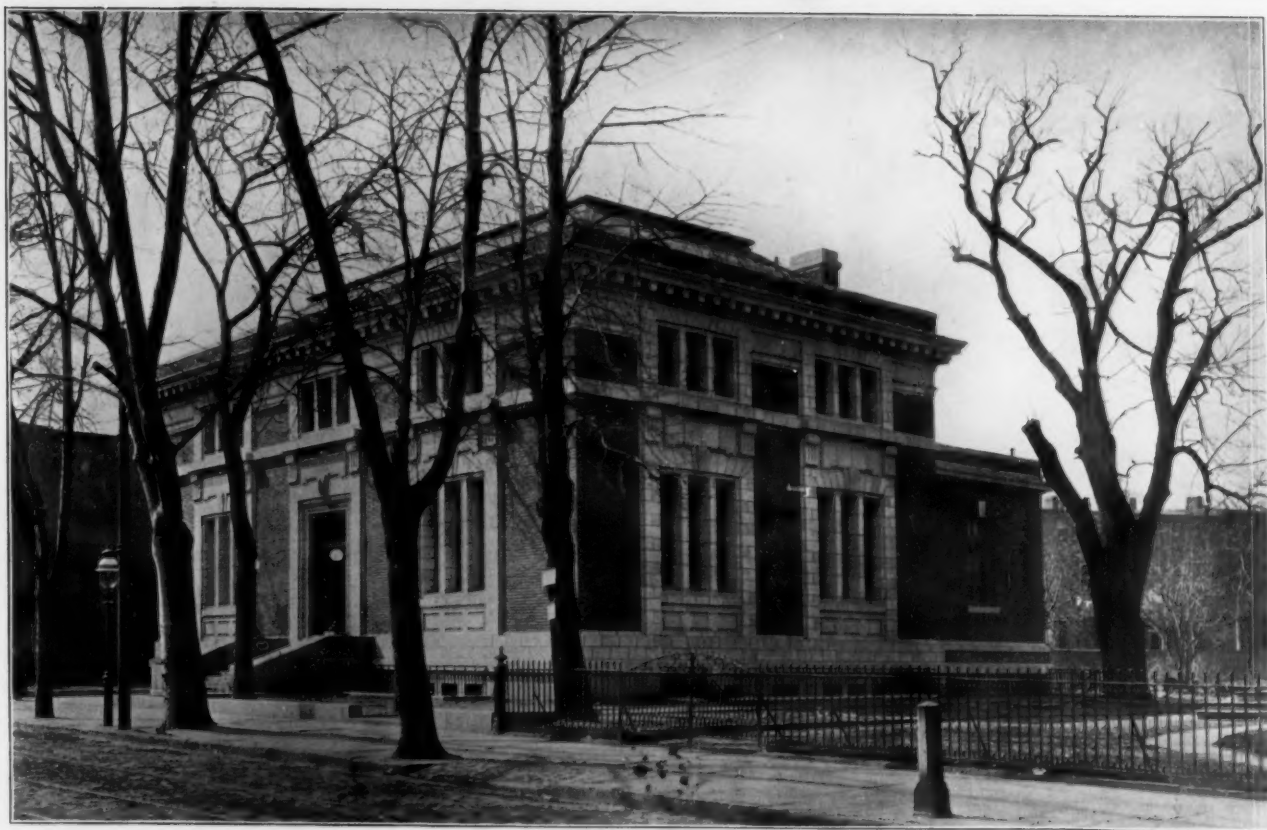
PUBLIC LIBRARY, NORFOLK, VIRGINIA.
 HERBERT D. HALE AND HENRY G. MORSE, JR., ASSOCIATE ARCHITECTS.





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YORK & SAWYER, ARCHITECTS.

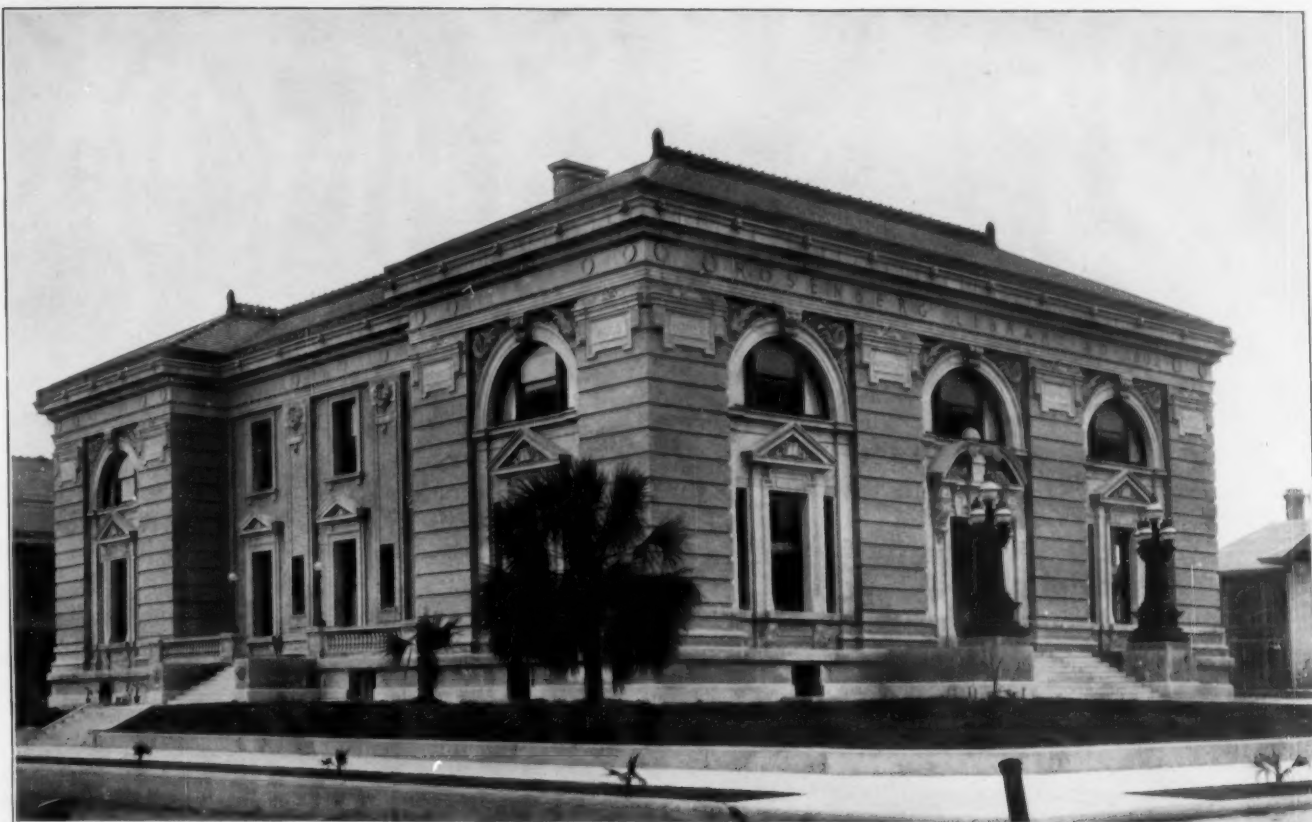




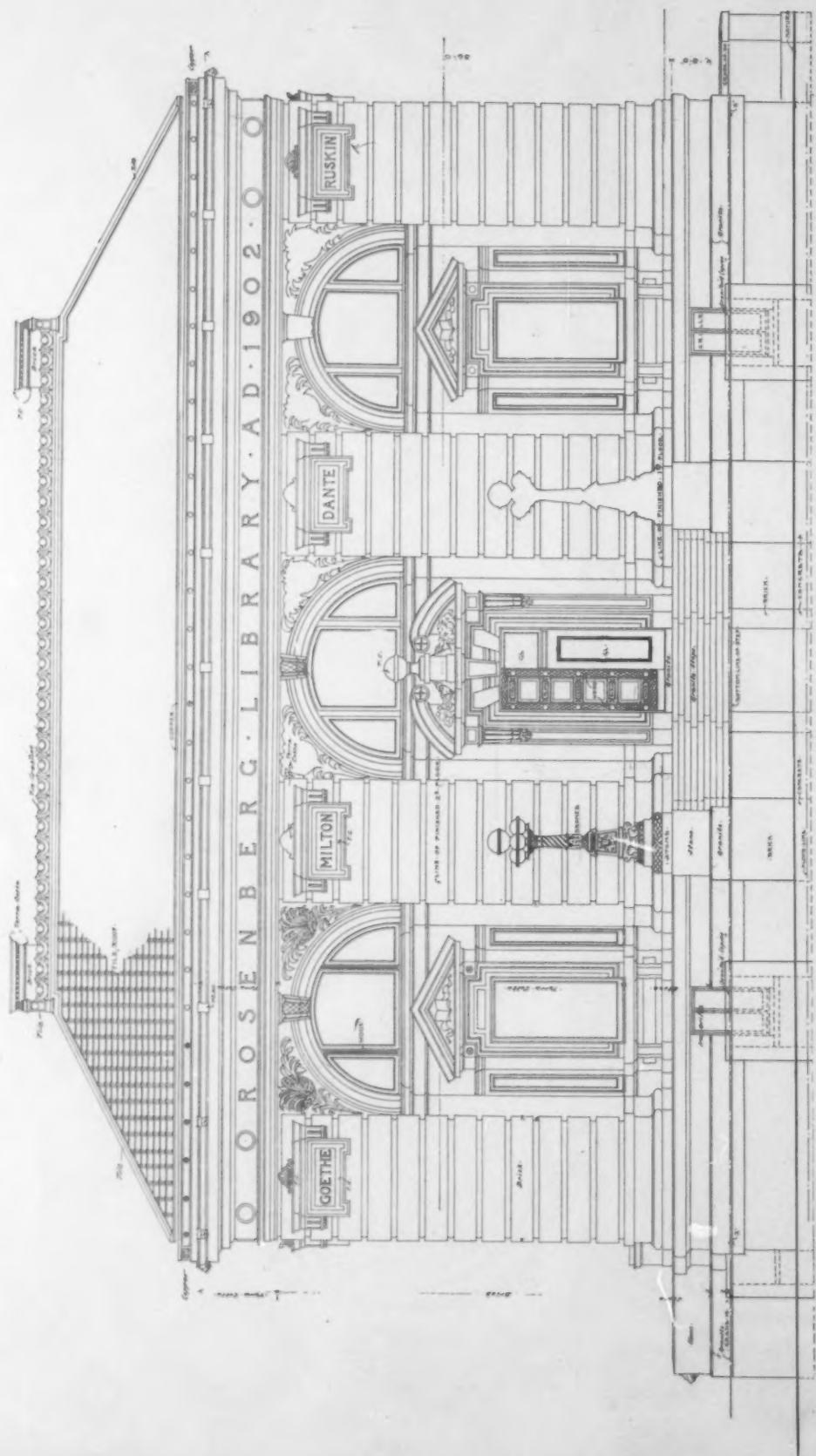
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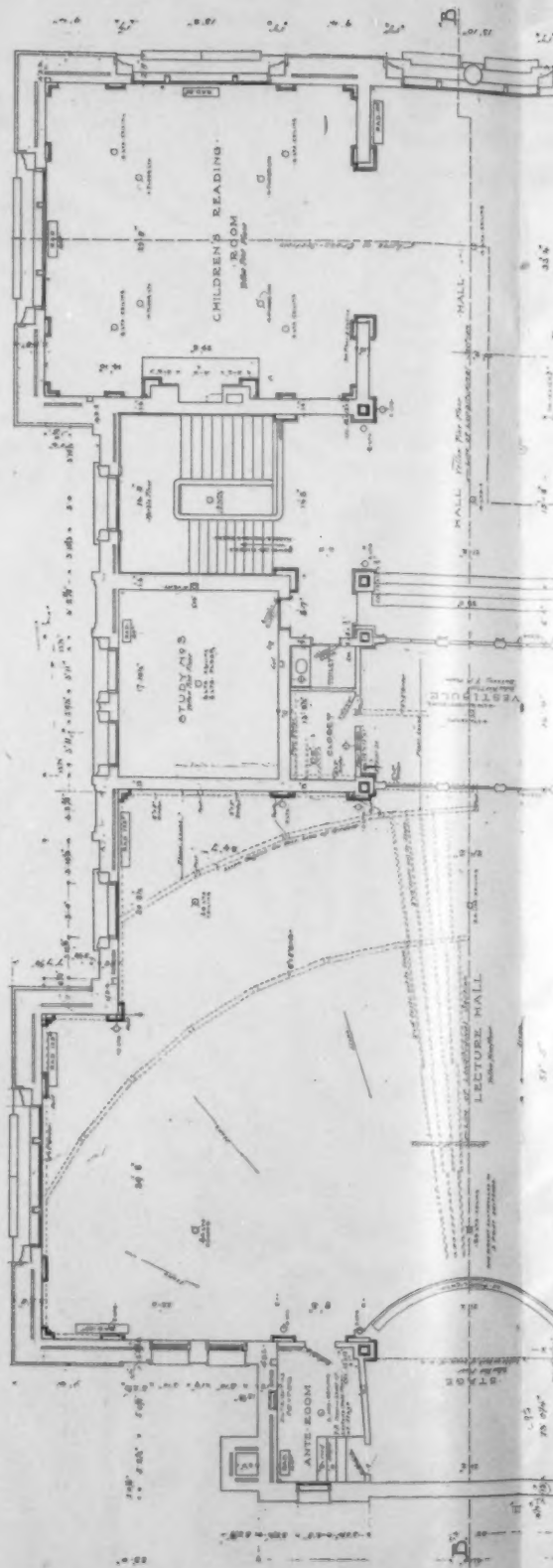


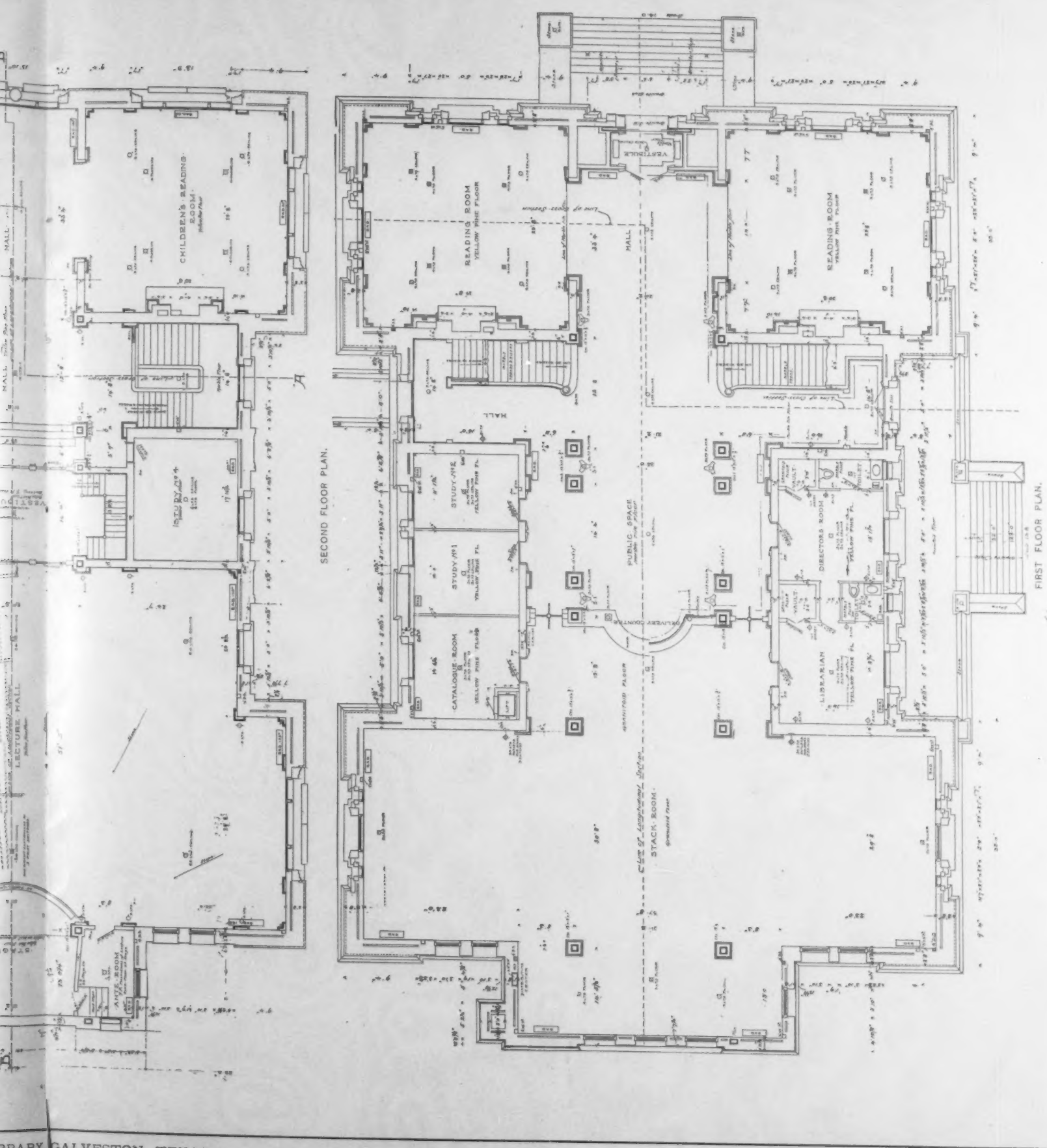


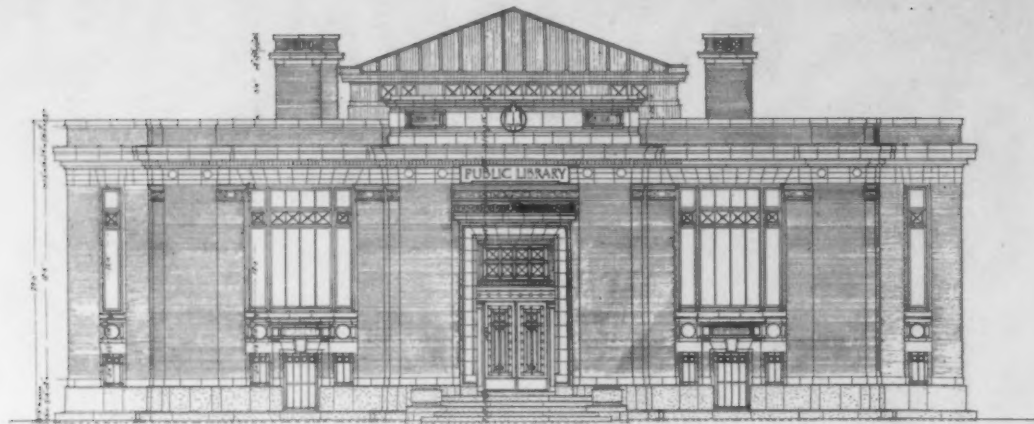
PUBLIC LIBRARY, GALVESTON, TEXAS.
EAMES & YOUNG, ARCHITECTS.



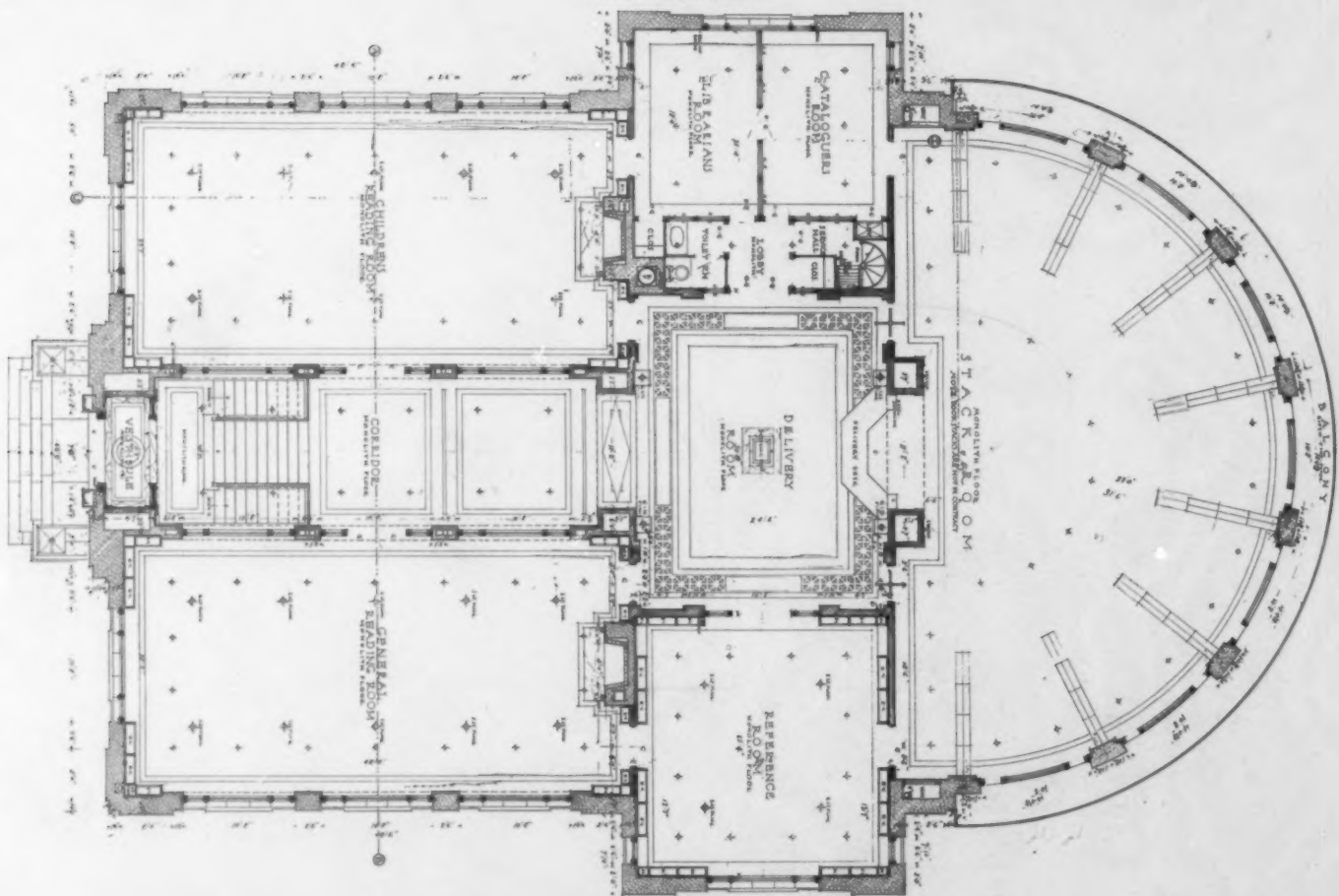
FRONT ELEVATION.



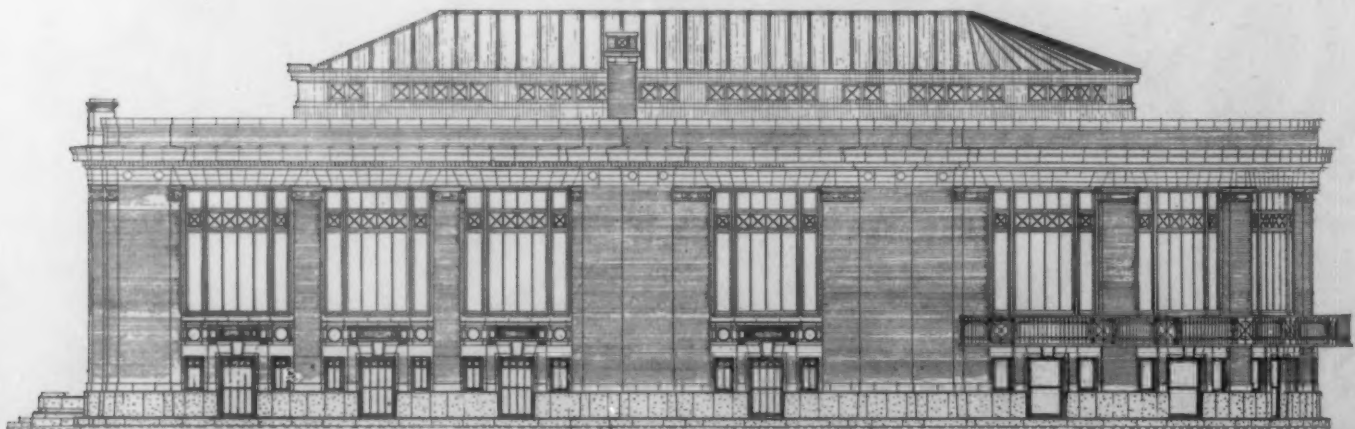




FRONT ELEVATION.



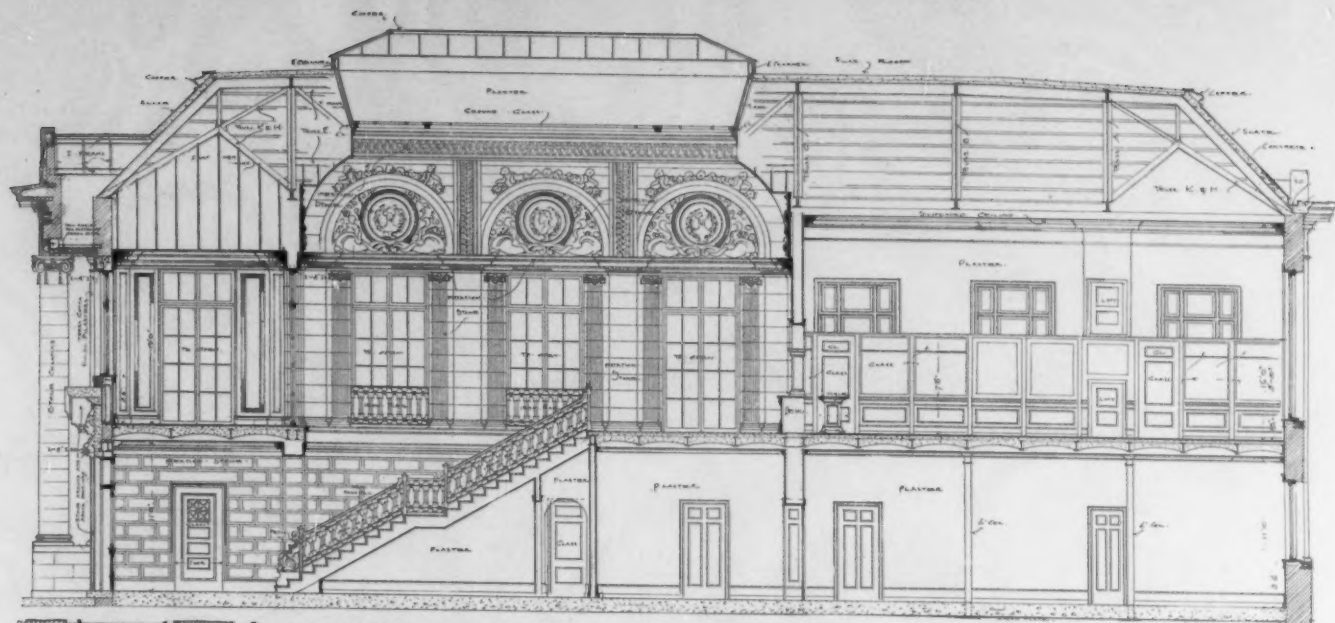
FIRST FLOOR PLAN.



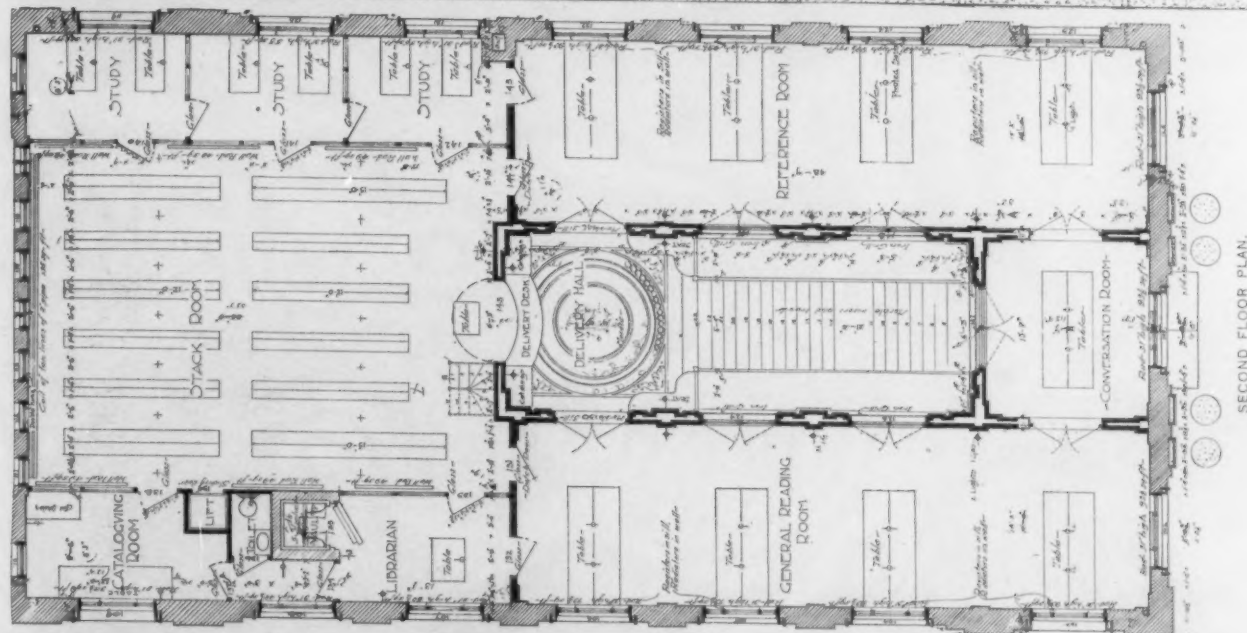
SIDE ELEVATION.

CARNEGIE LIBRARY, COLORADO SPRINGS, COL.

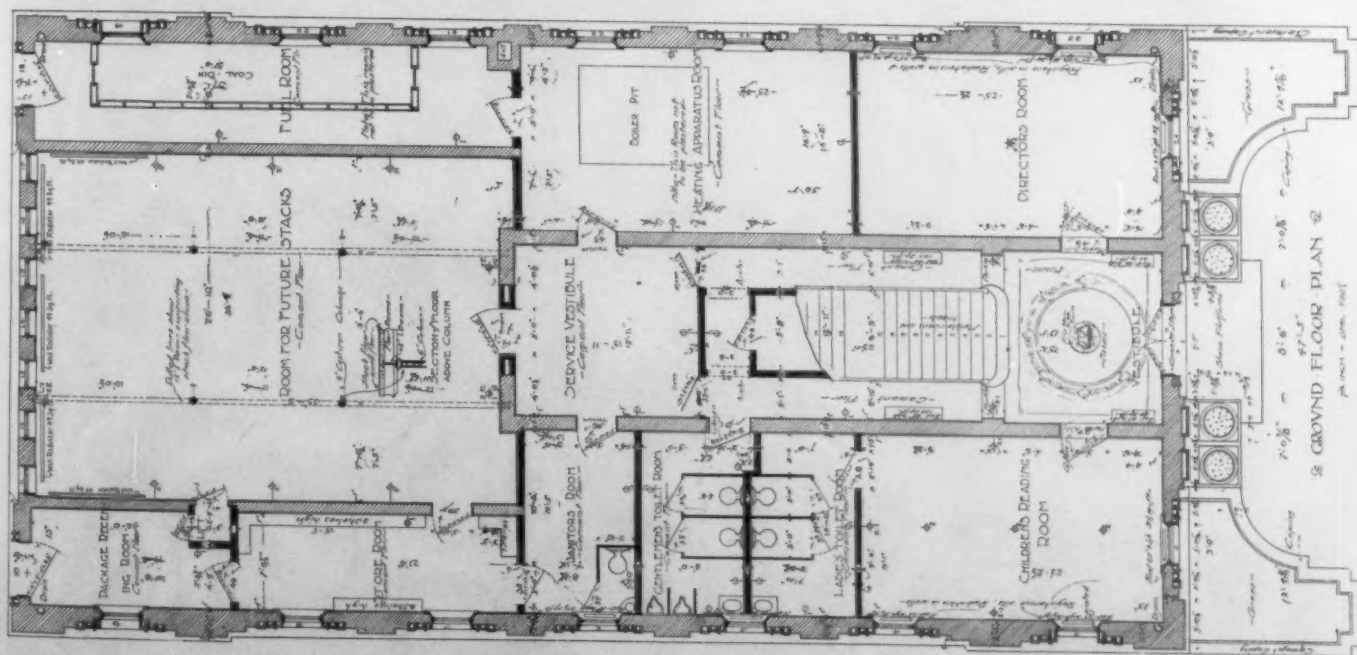
CALVIN KIESSLING, ARCHITECT.



LONGITUDINAL SECTION.



SECOND FLOOR PLAN.



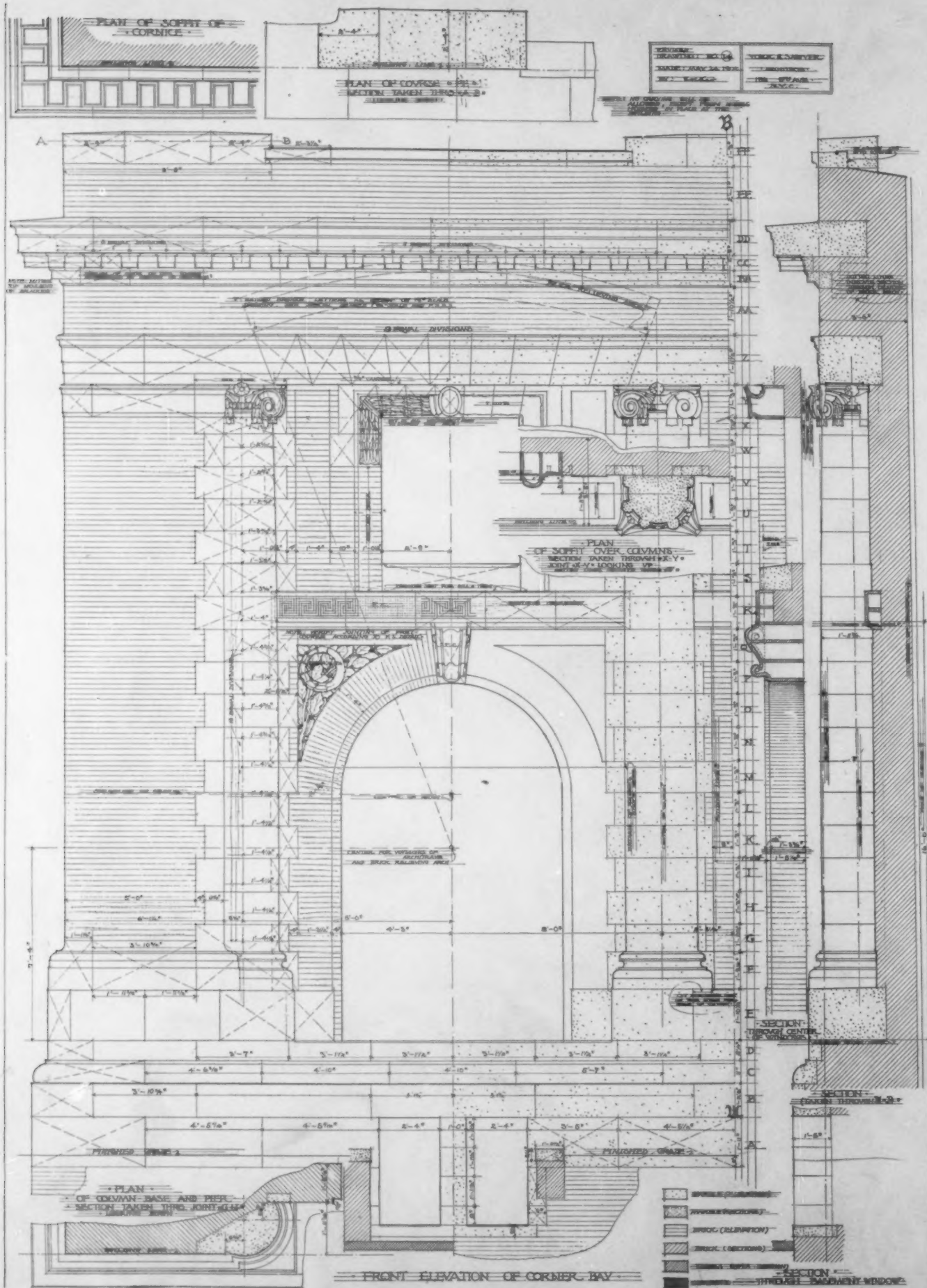
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THE BRICKBUILDER.

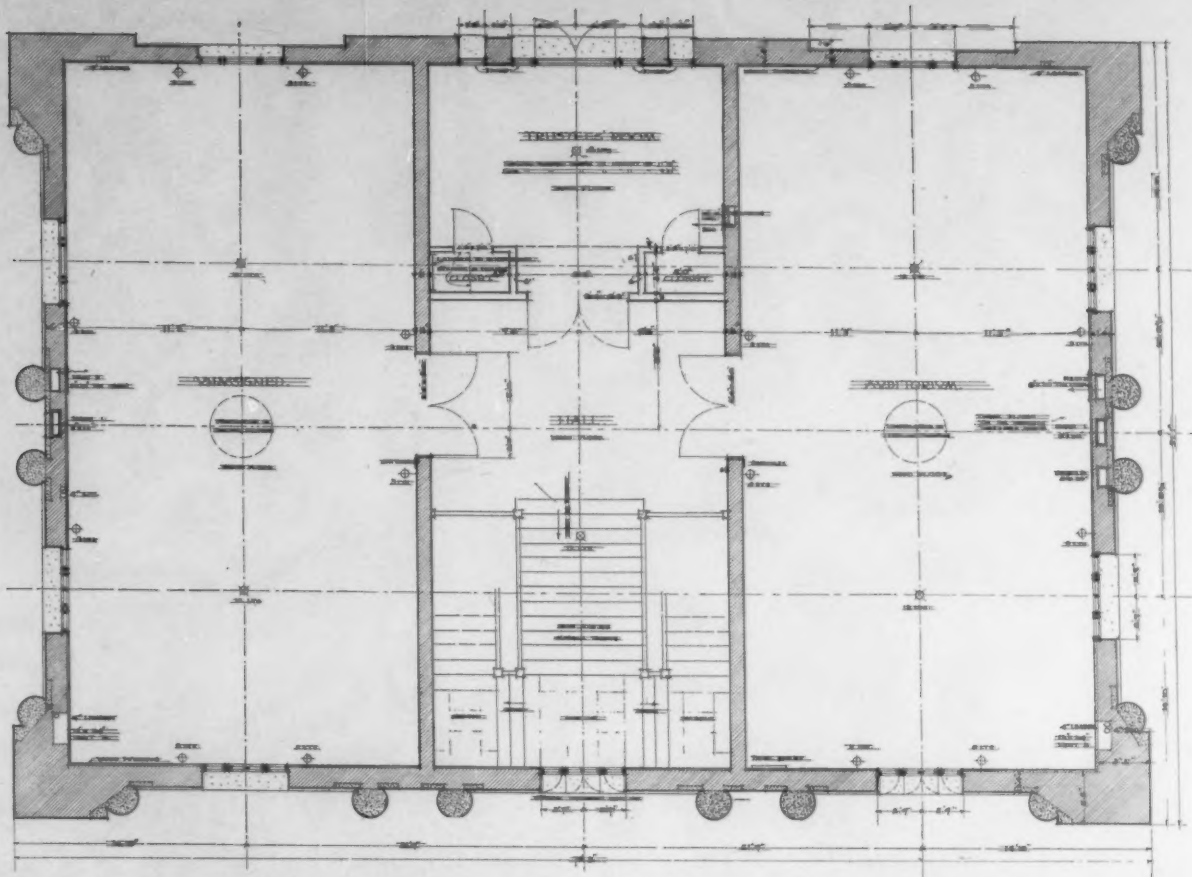
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PLATE 29.

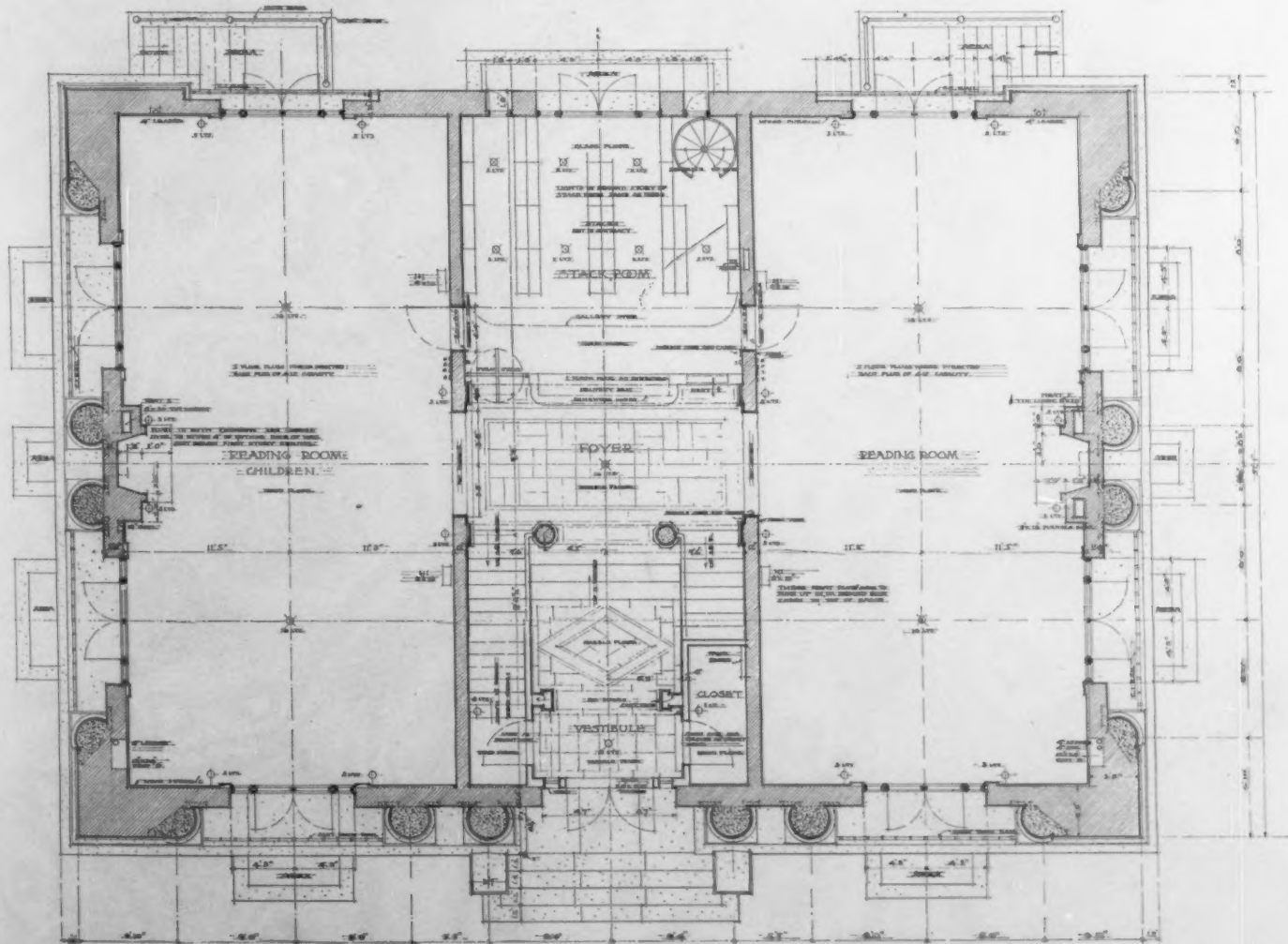


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YORK & SAWYER, ARCHITECTS.

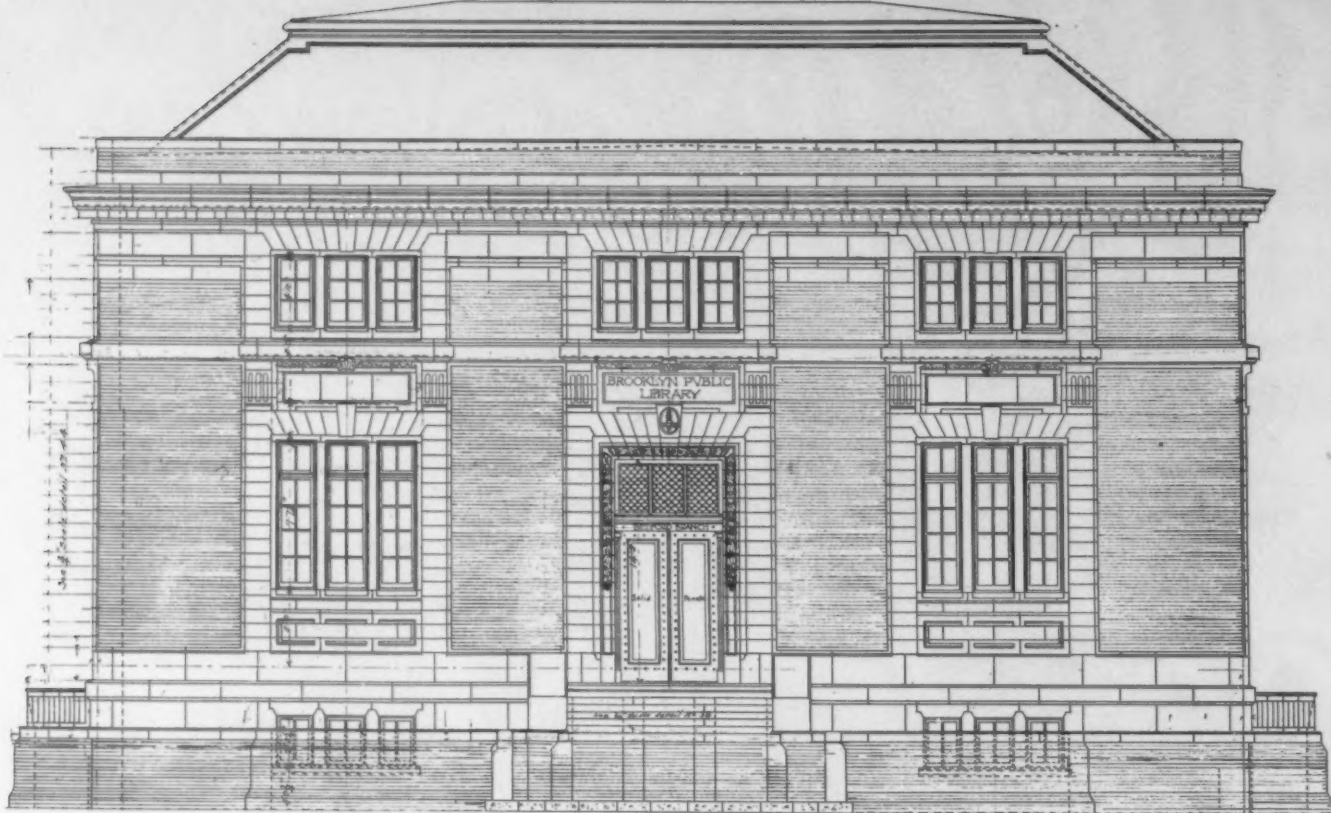


SECOND FLOOR PLAN.

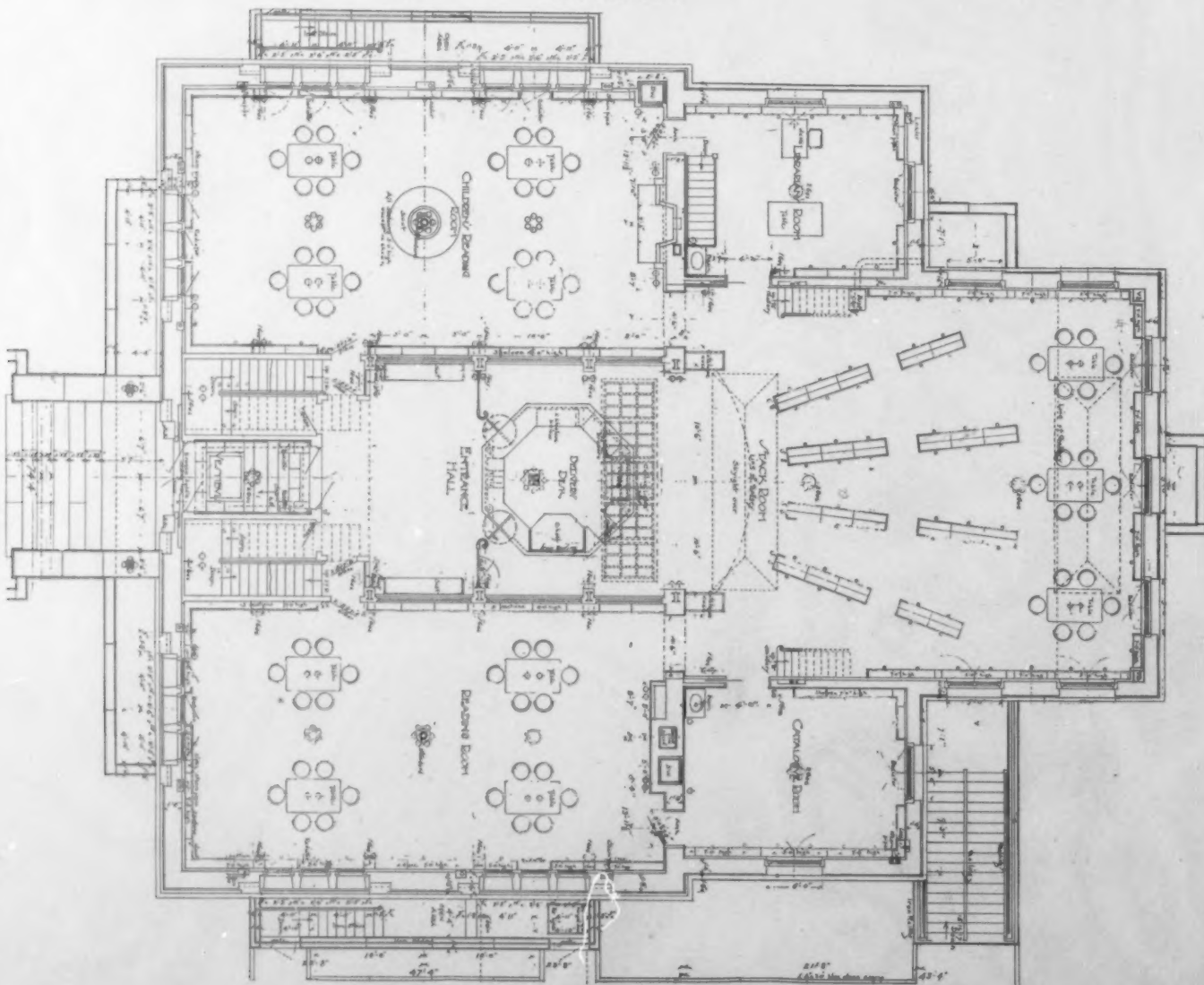


FIRST FLOOR PLAN.

FLOOR PLANS, PUBLIC LIBRARY, MONTGOMERY, ALA.
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FRONT ELEVATION.



FIRST FLOOR PLAN.

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VOL. 14, NO. 4.

PLATE 32.



FAR ROCKAWAY BRANCH, CARNEGIE LIBRARY, NEW YORK CITY.

LORD & HEWLETT, ARCHITECTS.